

1 UNITED STATES DISTRICT COURT  
 2 EASTERN DISTRICT OF VIRGINIA  
 ALEXANDRIA DIVISION

3 -----X  
 4 UNITED STATES, et al., : Civil Action No.:  
 : 1:23-cv-108  
 5 Plaintiffs, :  
 6 versus : Wednesday, September 11, 2024  
 : Alexandria, Virginia  
 7 GOOGLE LLC, : Day 3 p.m.  
 : Pages 1-180  
 Defendant. :  
 8 -----X

9 The above-entitled bench trial was heard before the  
 Honorable Leonie M. Brinkema, United States District Judge.  
 10 This proceeding commenced at 8:59 a.m.

11 A P P E A R A N C E S:

12 FOR THE PLAINTIFFS: GERARD MENE, ESQUIRE  
 OFFICE OF THE UNITED STATES ATTORNEY  
 2100 Jamieson Avenue  
 13 Alexandria, Virginia 22314  
 (703) 299-3700

14 JULIA TARVER WOOD, ESQUIRE  
 15 AARON TEITELBAUM, ESQUIRE  
 JEFFREY VERNON, ESQUIRE  
 16 MICHAEL FREEMAN, ESQUIRE  
 DAN GUARNERA, ESQUIRE  
 17 MICHAEL WOLIN, ESQUIRE  
 UNITED STATES DEPARTMENT OF JUSTICE  
 18 ANTITRUST DIVISION  
 450 Fifth Street, NW  
 19 Washington, D.C. 20530  
 (202) 894-4266

20 (State of VA) JONATHAN HARRISON, ESQUIRE  
 21 OFFICE OF THE ATTORNEY GENERAL  
 OFFICE OF THE SOLICITOR GENERAL  
 22 202 North Ninth Street  
 Richmond, Virginia 23219  
 23 (804) 786-7704

24  
 25 COMPUTERIZED TRANSCRIPTION OF STENOGRAPHIC NOTES

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

A P P E A R A N C E S:

FOR THE PLAINTIFFS: ELLIOTT DIONISIO, ESQUIRE  
(State of CA) OFFICE OF THE CALIFORNIA ATTORNEY  
GENERAL  
300 South Spring Street  
Suite 1700  
Los Angeles, California 90013  
(213) 269-6681

FOR THE DEFENDANT: CRAIG REILLY, ESQUIRE  
LAW OFFICE OF CRAIG C. REILLY  
209 Madison Street  
Suite 501  
Alexandria, Virginia 22314  
(703) 549-5354

JEANNIE RHEE, ESQUIRE  
WILLIAM ISAACSON, ESQUIRE  
BRYON BECKER, ESQUIRE  
PAUL, WEISS, RIFKIND,  
WHARTON & GARRISON LLP  
2001 K Street, NW  
Washington, D.C. 20006  
(202) 223-7300

COURT REPORTER: RHONDA F. MONTGOMERY, CCR, RPR  
Official Court Reporter  
United States District Court  
401 Courthouse Square  
Alexandria, Virginia 22314  
(703) 299-4599  
RMontgomery@courtreport.net

1	TABLE OF CONTENTS
2	WITNESSES
3	On behalf of the Plaintiff:
4	RAMAMOORTHY RAVI
5	Cross-examination by Mr. Issacson .....4
6	Redirect examination by Mr. Vernon .....66
7	Recross examination by Mr. Isaacson .....83
8	JOHN DEDERICK
9	Direct examination by Mr. Guarnera .....87
10	Cross-examination by Ms. Dunn .....144
11	MISCELLANY
12	Proceedings September 11, 2024 .....4
13	Certificate of Court Reporter .....181
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	



Cross-Examination - R. Ravi

1 Q And you helped on-board that tool?

2 A No. I just helped them evaluate that tool.

3 Q Did you -- oh, you helped on-board a tool for selling  
4 display ads?

5 A Display advertising, yes.

6 Q Okay. And in 2018, you started working for a company  
7 called InMobi, right?

8 A I don't work for them. I do some research with them.

9 Q And InMobi is a company that helps procure advertising  
10 in mobile apps, correct?

11 A Yes.

12 Q You understand InMobi to be one of Google's  
13 competitors, correct?

14 A Yes, I do.

15 Q All right. I want to make sure we understand the  
16 conduct that you're discussing today. You've given the  
17 opinion that certain conduct advantaged Google and  
18 disadvantaged its rivals.

19 A Yes.

20 Q And that conduct includes what's been called for  
21 shorthand first look, lost -- last look by itself and  
22 through its interactions with sell-side dynamic revenue  
23 sharing, or DRS, and with reserve price optimization, RPO.

24 Do I have that right?

25 A Reserve price optimization *per se* is not a conduct that

Cross-Examination - R. Ravi

1 I --

2 Q You talked about its interaction with --

3 A It's interactions with that, yes.

4 Q -- with last look, right. You are not giving  
5 independent opinions about sell-side dynamic revenue sharing  
6 or reserved price optimization; you're only speaking with  
7 respect to that interaction with last look, correct?

8 A So price optimization with Project Poirot, yes.

9 Q Project Poirot. Okay.

10 And then, as you said, you've given opinions about  
11 Project Poirot, right?

12 I've now described the conduct that you have  
13 reached the opinion advantaged Google and disadvantaged  
14 their rivals, right?

15 A You've described some of the conducts that I --

16 Q Well, I want to make sure I have the complete list that  
17 you've talked about today.

18 A Yes.

19 Q Is that the complete list?

20 A Along with UPR.

21 Q I'm sorry. You're right. I left out UPR. That's why  
22 I ask these questions. Right.

23 So along with UPR, that's the complete list?

24 A Yes.

25 Q Okay. Now, just to get the chronology straight, some

Cross-Examination - R. Ravi

1 of this happened.

2 Okay. Now, first look and last look were part of  
3 something called dynamic allocation, right?

4 A First look was simply the advantage of the first  
5 position in the waterfall. It was -- it interacted with  
6 dynamic allocation. We didn't speak about that today very  
7 much.

8 Q Right. But I'm trying to get some background here.

9 So first look interacted with dynamic allocation,  
10 and last look was a function of dynamic allocation; is that  
11 correct?

12 A No. The last look is just another characterization of  
13 that first position in the waterfall. So, again, it also  
14 interacted with dynamic allocation.

15 Q Okay. We'll come back to that.

16 A Yeah.

17 Q Now, the first look, as you said, ended in sometime --  
18 stopped having any meaningful impact sometime in 2015,  
19 correct?

20 A It's hard to characterize it. First look was in effect  
21 when the static bids were used as floors. So that's what we  
22 can say about it. When the floors were replaced by the  
23 header bidding bids, that's when first look became last  
24 look. So we cannot quite date that.

25 Q Right. I think in your testimony, though, you

Cross-Examination - R. Ravi

1 estimated it stopped having any meaningful impact by 2015,  
2 that is, first look?

3 A By 2015, that first look advantage transitioned to last  
4 look.

5 Q Okay. And last look ended in 2019, right?

6 A Yes.

7 Q So did reserve price optimization, right?

8 A Yes, reserve price optimization.

9 Q So did sell-side dynamic revenue share, right?

10 A Sell-side dynamic revenue share also ended in 2019,  
11 yes.

12 Q Right. And Project Poirot also stopped -- by 2019,  
13 Project Poirot did apply to AdX, right?

14 A Yes, from 2019 onwards.

15 Q Right. So the only conduct that you have given  
16 opinions on today that advantaged Google and disadvantaged  
17 rivals after 2019, five years ago, the only conduct in the  
18 last five years that you've reached an opinion on about  
19 advantaging Google and disadvantaging rivals is UPR, uniform  
20 price reserves, right?

21 A The only one among those five that's in effect today is  
22 UPR, but we talked about the time impact of these conducts  
23 as well in my direct.

24 Q Right. So you've read the other expert reports.  
25 You've read the complaint. You know we're an alleged



Cross-Examination - R. Ravi

1 monopolist, right?

2 A Yes, I believe that's right.

3 Q So what's happened here, in your view, is the alleged  
4 monopolist engaged in conduct that advantaged Google and  
5 disadvantaged rivals and, except with respect to UPR, it  
6 ended that conduct five years ago?

7 A There was a conduct that lasted from 2009 to 2019,  
8 various conducts that I describe in my report, and they  
9 ended and UPR began in 2019. And these conducts that  
10 stretched over a decade, I also write and opine, have this  
11 effect via the feedback loops we were talking about, yes.

12 Q Let's try answering my question, sir.

13 A Okay.

14 Q The pieces of conduct that you say Google implemented  
15 to advantage itself and disadvantage rivals by this alleged  
16 monopolist, they ended five years ago except for UPR. I'm  
17 right, aren't I?

18 A Yes, you're right about that.

19 Q And in the last five years, there's been developments  
20 in display advertising, hasn't there?

21 A Yes, there have been.

22 MR. ISAACSON: Can I look at, Matt, DTX 1828.

23 BY MR. ISAACSON

24 Q Now, this is a chart from Professor Israel's report.

25 THE COURT: I assume there's no objection to this

Cross-Examination - R. Ravi

1 from the expert's report, right?

2 MR. VERNON: It's a little beyond the scope, but  
3 no objections yet.

4 THE COURT: It's in.

5 BY MR. ISAACSON

6 Q And you've seen this before, right?

7 A Yes, I've seen this chart, I believe.

8 Q And the data comes from something called EMARKETER.  
9 That's a public source of data that you use, right?

10 A I have used EMARKETER data, yes.

11 Q And since 2019, would you agree with me there has been  
12 a remarkable increase in display ad spending?

13 A Yes, that's what the chart shows.

14 Q And do you know what Google's share of that ad spending  
15 is?

16 A I did not analyze that; so I don't know exactly the  
17 number.

18 Q You know it's gone down, don't you?

19 A I wouldn't actually know that.

20 Q Okay. Since 2019 -- if we could look at DTX 1915.

21 MR. VERNON: This is beyond the scope. Professor  
22 Ravi didn't testify about EMARKETER at all.

23 THE COURT: Well, I've already indicated I'm  
24 relaxing the rules on scope because it can be corrected on  
25 redirect.

Cross-Examination - R. Ravi

1 Is that the only objection to 1915?

2 MR. VERNON: Yes, Your Honor.

3 THE COURT: All right. It's in. Overruled.

4 BY MR. ISAACSON

5 Q All right. In the last five years, right, social media  
6 spending for display ads has risen from about 37 billion to  
7 \$65 billion and, during that period, has been just under  
8 half of all display ad spending.

9 You knew that, right?

10 A That's what the chart says.

11 Q All right. DTX 1926, one more chart.

12 THE COURT: Any objection?

13 MR. VERNON: No objection, Your Honor.

14 THE COURT: All right. It's in.

15 BY MR. ISAACSON

16 Q This is, again, EMARKETER data, sir. Amazon, since  
17 2019, has almost quadrupled in display ad spending.

18 You know that Amazon has been taking off display  
19 ads. You know that, right?

20 A I knew that broadly, yes.

21 Q And you know that happened since 2019, right?

22 A Yes, I knew that happened in the recent past.

23 Q And what happened in 2019, when this conduct you were  
24 describing Google got rid of, that was when Google went to a  
25 unified first-price auction, right?

Cross-Examination - R. Ravi

1 A It did go to that in 2019, yes.

2 Q Right. And you don't have any issues with the unified  
3 first-price offer. You've not said it's inefficient or  
4 harming rivals, right?

5 A No, I haven't given that opinion. Yes.

6 Q All right. Now, you have described the combination of  
7 ad tech products as being across the buy and sell side of an  
8 ad tech ecosystem, and you call that an ad tech stack,  
9 right?

10 A Yes. That's what it's usually referred to as.

11 Q Right. The ad tech stack usually consists of,  
12 according to you, first publisher ad servers, correct?

13 A Yes.

14 Q Second, ad exchanges, correct?

15 A Yes.

16 Q And, third, buying bidding tools, including DSPs and  
17 advertiser ad networks, correct?

18 A That's correct, yeah.

19 Q And, now, you have given opinions that Google's conduct  
20 disadvantaged rivals. I want to understand what you mean by  
21 "rivals." All right?

22 Now, you've written an article that's in your  
23 binder. This is -- it's a tab with the date 2021 on it. It  
24 says Exhibit 3 because it was the Exhibit 3 to your  
25 deposition.

Cross-Examination - R. Ravi

1 A Yes, I see it.

2 Q Okay. Now, this is an article that you wrote -- or  
3 cowrote in 2021 called "First-Price Auctions in Online  
4 Display Advertising," correct?

5 A Yes, correct.

6 Q Okay. And what you say in 2021 to begin this article  
7 is that "Advertising via online display ads has risen  
8 dramatically in the last decade," right?

9 A Yes, that's the first line.

10 Q And when you've been writing about that, you've been  
11 looking at EMARKETER data for that, right?

12 A Yes. I think the EMARKETER data we cite is not from  
13 2021; it is probably from when that paper was submitted.

14 Q All right. Then in the right-hand column of page 1,  
15 the title of that section of the article is "Evolution of  
16 the Display Advertising Market."

17 It says, "The display advertising, with an  
18 estimated market share of 54 percent in the United States,  
19 has grown to be a significant proportion of the digital  
20 advertising market."

21 So you're referring to a digital advertising  
22 market and a display advertising market.

23 Now, when you are saying that Google was  
24 disadvantaging its rivals, were you referring to the digital  
25 advertising market?

Cross-Examination - R. Ravi

1 A I wasn't -- first of all, this paper and its use of the  
2 word "markets" has nothing to do --

3 Q Sir, I'm asking you a question about your testimony. I  
4 am asking you, when you used the term "rivals," "Google's  
5 rivals," were you referring to rivals in a digital  
6 advertising market?

7 A The rivals are clear from context. The rival of an ad  
8 exchange are other exchanges --

9 Q Sir --

10 A -- the rival of a bidding tool are the other bidding  
11 tools.

12 Q Sir, were you referring to rivals in a digital  
13 advertising market?

14 A Again, when I talked about the conducts in these  
15 different locations in the ad stack, I was talking about the  
16 rival of that particular product.

17 Q Were you talking about rivals in the ad stack?

18 A When I was talking about rivals in my report, I was  
19 talking about the rivals of that corresponding product that  
20 I was analyzing.

21 Q So you were just looking at a corresponding product?  
22 That's it?

23 A Maybe I should just make this clear.

24 Let's take any one of these conducts. We  
25 should -- we could take first look, last look, set aside the

Cross-Examination - R. Ravi

1 others. These were conducts that were carried out by the  
2 DFP and AdX combination.

3 So the rival there would be the other companies  
4 that were providing the other products that were providing  
5 the same functionality. So in this case, it would be an ad  
6 exchange.

7 Q So when you were giving opinions about hurting rivals,  
8 you were not applying that to any market definition; is that  
9 correct?

10 A That's right. I wasn't talking about market  
11 definitions in my characterization.

12 Q So you have not given any opinions in this case that  
13 Google has hurt rivals in any ad tech market for open web  
14 display advertising. Is that correct?

15 A These rivals in these exchanges, yes. I mean, broadly  
16 speaking, that is correct. But my -- these are the  
17 exchanges that transact open web display advertising.  
18 That's why it is relevant to this case.

19 Q Right. In fact, this term "open web display  
20 advertising," at the time of your report and your  
21 deposition, you understood open web display advertising to  
22 refer to open auctions versus private auctions, correct?

23 A I recall, when you asked me about that in the  
24 deposition, that was the first association I made, yes.

25 Q Right. So when I asked you in your deposition about

Cross-Examination - R. Ravi

1 open web display advertising, with all of your background  
2 and all of your work on these reports, the first association  
3 you made was to the distinction between open auctions and  
4 closed auctions. Is that right?

5 A Yes, I think that's what I recall saying then.

6 Q Right. And just to be clear, open auctions refer to  
7 auctions available to many buyers as opposed to closed  
8 auctions, which are available to a selected group, correct?

9 A Yes, private auctions which are, yeah, right.

10 Q And even though you teach courses on digital  
11 advertising and you've published articles about digital  
12 advertising and you've worked as a consultant in the  
13 industry and after your two reports, you did not understand  
14 that open web display advertising had the meaning that  
15 plaintiffs had given it in this case. Isn't that right?

16 A Would you explain what that meaning is that I did not  
17 understand it to be?

18 Q Okay. You don't know what the plaintiffs' meaning of  
19 "open web display advertising" is?

20 A No, I do know that.

21 Q And the meaning that you gave when I asked you about it  
22 was not the meaning the plaintiffs give it in this case,  
23 right?

24 MR. VERNON: Objection. Improper impeachment.

25 THE COURT: I'm going to sustain that objection.



Cross-Examination - R. Ravi

1           From your experience, is -- the term "open web  
2 display advertising," is that a term of art in your field?

3           THE WITNESS: No. That particular combination of  
4 four words is not used commonly, but it is well understood  
5 that "open web ads" means these ads that are sold on open  
6 auctions.

7           THE COURT: On the web?

8           THE WITNESS: On the web, yeah. So when you put  
9 the "web" qualifier with it, it would mean open auction  
10 impressions sold on the web.

11 BY MR. ISAACSON

12 Q       And there are also closed auctions on the web, aren't  
13 there?

14 A       Yes. And they are of two types, yeah.

15 Q       So just to be clear again --

16           MR. ISAACSON: And I'll stop this, Your Honor, if  
17 I've made this clear.

18 BY MR. ISAACSON

19 Q       -- but the open auction just refers to the number of  
20 buyers; there's many buyers. In the closed auction, you  
21 have a select group of buyers. It has nothing to do with  
22 whether the ad is on a web or on an app or a connected TV,  
23 right?

24 A       So open -- the closed just means that it's closed to a  
25 set of private buyers. But I agree. When you add the "web"

Cross-Examination - R. Ravi

1 qualification with it, it would --

2 Q Okay. You said you didn't do any quantitative  
3 analysis. You have done a lot of computer monitoring as  
4 part of your past work, right?

5 A Yes. Broadly speaking, yeah.

6 Q You didn't do any computer modeling of your own, in  
7 this case, your own work to reach your opinions about any  
8 effects on rivals, right?

9 A Yes.

10 Q You did not run any experiments with data to support  
11 your opinions about effects on rival, right?

12 A Yes.

13 Q You didn't do any quantitative analysis of your own --  
14 well, let me just say. When you were walking through those  
15 charts and talking about potential effects, those were all  
16 theoretical, right? You haven't done any qualitative  
17 analysis showing that there are any of those effects?

18 MR. VERNON: Objection. Compound.

19 THE COURT: Overruled.

20 THE WITNESS: The charts I was showing  
21 demonstrated numbers from quantitative analysis done by  
22 other reliable sources, yes.

23 MR. ISAACSON: I'm sorry. I didn't -- could you  
24 read that back for me. I didn't understand the answer.

25 (Answer read back.)

Cross-Examination - R. Ravi

1 BY MR. ISAACSON

2 Q Did you hear my question? I was asking about any work  
3 you did. All right? You have not done any quantitative  
4 work to show that those potential effects you were  
5 describing on your charts happened?

6 A Yes. I did not work with data to show that, yes.

7 Q And so with respect to what happened in 2019, the  
8 unified pricing rules, so you do agree that establishing  
9 consistent price floors for these auctions minimizes bidder  
10 error, correct? Bidder error, error by bidders.

11 A Broadly speaking, that is the case, yes.

12 Q All right. And it also, broadly speaking, is true that  
13 establishing consistent price floors improves bidder  
14 decision-making?

15 A I mean, having a -- having the knowledge of the floor  
16 helps the bidders with their decisions, yes, that is true.

17 Q And at least by the time of your deposition, you were  
18 unaware of whether other AdX tools or companies have similar  
19 rules to unified pricing rules of Google?

20 A Yes, I wasn't clear about that.

21 Q In your binder, there should be something, DTX 1539.

22 THE COURT: Any objection to 1539?

23 MR. VERNON: I object to this as hearsay.

24 MR. ISAACSON: This is from what Xandr promotes as  
25 seller best practices. I don't think truth or falsity is an

Cross-Examination - R. Ravi

1 issue here. These are standards in the field according to  
2 Xandr.

3 MR. VERNON: It's still a statement by someone not  
4 in the box.

5 THE COURT: I'll sustain the objection.

6 BY MR. ISAACSON

7 Q And you agree you do not know enough about what  
8 Google's competitors are doing with respect to uniform price  
9 floors to have an opinion about whether Google's uniform  
10 price rules are appropriate?

11 A Was that two questions?

12 Q I think it was one. It was an attempt at one.

13 THE COURT: Well, break it apart.

14 MR. ISAACSON: Sure.

15 BY MR. ISAACSON

16 Q You do not -- given what you've said about your lack of  
17 knowledge about what Google's competitors are doing about  
18 unified pricing rules, you don't have an opinion about  
19 whether unified pricing rules are appropriate or not, right?

20 A I have an opinion about whether Google's unified  
21 pricing rules were appropriate or not. That's what I just  
22 said in my opinions, yes.

23 THE COURT: The question is do you have any  
24 opinion as to what other --

25 THE WITNESS: No, I do not have any opinion about

Cross-Examination - R. Ravi

1 the others because I'm not aware of a lot of them, yeah.

2 BY MR. ISAACSON

3 Q All right. Would you agree that, with respect to  
4 Google, that because you don't know about what those other  
5 companies are doing, you lack sufficient context to  
6 understand whether Google's rules were appropriate or not?

7 A My opinions were about what those rules did to the  
8 publisher customers. So that's what my opinion was about.  
9 So whether it was appropriate, I don't have that comparative  
10 analysis with the other exchanges of what they were doing.

11 Q All right. The -- you suggest in your testimony, I  
12 believe, that "Uniform pricing rules successfully help shift  
13 business to AdX from rival exchanges." Is that right? Is  
14 that your opinion?

15 A Yes.

16 Q Okay. And in your report, you cited two Google  
17 documents for this point, right?

18 A Yes, I think.

19 Q That's what you're relying on. You are relying for  
20 this conclusion on two documents?

21 A Yes. Among many that I have examined, these are the  
22 two that I might have cited, yes.

23 Q Well, that's an interesting point.

24 How many documents have you reviewed in this case?  
25 It's a lot, right?

Cross-Examination - R. Ravi

1 A Wow, that's a lot, yes.

2 Q And you found two on this point, right?

3 A I was trying to be careful about putting the right  
4 documents there. That's why they're selective, yeah.

5 Q Now, the first one has to do with the Rubicon project.  
6 Do you remember that?

7 A I do remember that.

8 Q Okay. If you could look at your binder at DTX 774,  
9 which is cited in your report --

10 THE COURT: Any objection to 774?

11 MR. VERNON: No objections.

12 THE COURT: All right. It's in.

13 BY MR. ISAACSON

14 Q All right. This document -- if you look at page 3 of  
15 9, the data in this document is data that Rubicon sent to  
16 Google, right?

17 A Yes. That's my understanding.

18 Q Okay. And you did not discuss or evaluate the  
19 methodology behind Rubicon's figures, right?

20 A I could not, yeah.

21 Q Yeah, exactly. You could not. You talked about your  
22 ability to look at certain documents and understand the  
23 validity of the data. This is not one of them. You don't  
24 know how Rubicon got these numbers?

25 A Yes. That's correct, yeah.

Cross-Examination - R. Ravi

1 Q And then if you look at DTX 768, which is the second  
2 document you cited. Now we're talking about --

3 THE COURT: I'm sorry.

4 Any objection to 768?

5 MR. VERNON: No objections, Your Honor.

6 THE COURT: All right. It's in.

7 BY MR. ISAACSON

8 Q All right. This is from August 2019. You recognize  
9 this as the second document you relied on, right?

10 A Yes, I do.

11 Q Okay. And then it says in the second paragraph  
12 underneath a reference -- well, under -- well, it's hard to  
13 count the paragraphs. The paragraph that begins "with UPR"  
14 towards the top.

15 A Yes, I see.

16 Q All right. It says in the middle, "On 3PE" --  
17 third-party exchanges -- "there's a slight (1 to 3 percent)  
18 decrease in impressions and revenue," right?

19 A Yes.

20 Q Okay. And so the effect that you're describing on  
21 other exchanges is this slight 1 to 3 percent decrease,  
22 right?

23 A Yes. This is the one I cite in my report.

24 Q And this is August 2019, right? You have no other  
25 information after August 2019 of any effect on rivals from

Cross-Examination - R. Ravi

1 the uniform pricing rules, right?

2 A Yes, I do not have any more. Yeah.

3 Q All right. With respect to first look, you refer to  
4 the waterfall. Now, we've looked at a charts of the  
5 waterfall. So as background, from 2000 to 2010, you agree  
6 the waterfall was something that was generally being used by  
7 SSPs, including DFP DoubleClick Publishers?

8 A Yes.

9 Q The waterfall was prevalent from 2000 to 2010, correct?

10 A Yes, it was prevalent. Yeah.

11 Q It was a traditional way of accessing demand from  
12 several sources. This is not something that was exclusive  
13 to Google?

14 A No. Google did not invent the waterfall.

15 Q Okay. In fact, then what happened in 2009, Google  
16 relaunched AdX with real-time bidding, right?

17 A With real-time bidding on AdX, yes.

18 Q Yeah. And Google, as you know, was one of a few  
19 companies during the period 2008 to 2010 that launched  
20 real-time bidding, right?

21 A Yes. Yeah. That would be true, roughly, yeah.

22 Q Okay. Now, you agree -- we've talked about this term  
23 "dynamic allocation." But you agree that dynamic allocation  
24 was an existing feature of DoubleClick for Publishers when  
25 Google acquired DoubleClick in 2008, correct?



Cross-Examination - R. Ravi

1 A Yes. Dynamic allocation was not invented by Google.

2 Q Google didn't invent this technology or -- this is what  
3 they acquired?

4 A I agree. Dynamic allocation existed before Google  
5 acquired DFP.

6 Q And DoubleClick had a nascent exchange, as people have  
7 said, but that exchange did not have real-time bidding,  
8 right?

9 A That's my understanding, yes.

10 Q Right. It was Google that, after that acquisition,  
11 that built out real-time bidding along with a few other  
12 companies?

13 A Yes, that's my understanding too. With a few other  
14 companies, yeah.

15 Q Okay. And the preferential position of AdX over other  
16 exchanges that you say occurred in the waterfall was part of  
17 the DoubleClick technology that Google acquired, correct?

18 A It was part of the reimplementing of Google, as you  
19 described it, yeah, of that technology, yeah.

20 Q That was -- what you called first look was an existing  
21 feature of DoubleClick for Publishers when Google acquired  
22 it, right?

23 A I'm not sure that DoubleClick had a preferential  
24 position before Google acquired it for one particular  
25 exchange.

Cross-Examination - R. Ravi

1 Q But you agree product changes would have been necessary  
2 to the technology acquired from DoubleClick to remove the  
3 disadvantage to rivals that you described from first look?

4 A I do not see that.

5 Q All right. If we can look at your deposition -- I  
6 believe there's one in your binder and we've given you a  
7 copy as well.

8 THE COURT: Is this the one from February 20?

9 MR. ISAACSON: Yes. There's only one deposition  
10 of this gentleman.

11 THE WITNESS: Could you point me to...

12 BY MR. ISAACSON

13 Q So page 131 at line 1.

14 A Thank you.

15 Q And I think, based on your answer, I'm using this to  
16 refresh your recollection.

17 You see there I asked you the question, "In order  
18 to get rid of the effect on rivals from the preference  
19 you've been describing, do you assume that that preference  
20 existed in DoubleClick for Publishers prior to acquisition?  
21 Google, upon acquiring it, would have had to redesign the  
22 system in some manner in order to get rid of that  
23 preference; is that correct?"

24 MR. VERNON: Objection. I don't know what he's  
25 refreshing here. I don't know what my colleague is

Cross-Examination - R. Ravi

1 refreshing here because the answer just says, "If we  
2 assume."

3 MR. ISAACSON: No, no, not the relevant part of  
4 the answer. He's assuming that AdX had a preferential  
5 position, and he's testified it does.

6 He says, "If we assume that AdX had a preferential  
7 position before Google acquired DFP, some product changes  
8 would be necessary in DFP."

9 MR. VERNON: That doesn't sound to me like he's  
10 saying that's the case. It sounds like --

11 THE COURT: Well, I'm overruling the objection.  
12 Let's go.

13 THE WITNESS: Yeah, the way I read this, line 10  
14 says, "If we assume."

15 BY MR. ISAACSON

16 Q Well, let me put it this way.

17 A Yes.

18 Q Do you know whether first look was something that was  
19 in place due to the technology from DoubleClick for  
20 Publishers and whether Google, in order to get rid of that,  
21 would have had to redesign the system? Do you know?

22 A I don't, but the waterfall is -- there is no technology  
23 that locks in that first position in any way. The waterfall  
24 is just an ordering. So I don't understand what technology  
25 you'd be referring to.

Cross-Examination - R. Ravi

1 Q Okay. You used the term "Google is advantaging  
2 itself." Now, when you say Google is advantaging or  
3 preferencing Google, for example, by winning bids in AdX,  
4 you were referring to Google customers who are being  
5 advantaged because Google customers either win bids or  
6 Google publishers sell ads on their space, right?

7 A What was the question?

8 Q All right. When you used the phrase "Google  
9 preferenced itself," "Google advantaged itself," the ones  
10 who got the advantage were the Google customers, right?

11 A Not always.

12 Q Okay. When you say that there were more -- that Google  
13 advantaged itself because it took business away from rivals,  
14 that's because Google customers won bids, for example, on  
15 AdX?

16 A That is true. That's a consequence. That's one of the  
17 consequences of its advantaging itself, yes.

18 Q Right. And so you consider it self-preferencing of  
19 Google when it helps its customers win, right?

20 A In the cases that it helped it win, yes, it did. Yes.

21 Q And that's part of your opinion. When you are saying  
22 that Google has preferenced itself, it's because it's  
23 helping its customers?

24 A Among others, among -- not just its customers. What I  
25 was saying, it was preferencing itself to help some of its

Cross-Examination - R. Ravi

1 own products and its customers.

2 Q All right. The -- with regard to the first look, you  
3 mentioned sponsorship, I think. You agree that, as of 2014,  
4 publishers could configure the priorities to put other  
5 exchanges, and they could put them in front of AdX, correct?

6 A I do remember something like that from the -- yeah.

7 Q All right. Well, let me make sure we've locked this  
8 in.

9 Could we look at page 41 and page 42 of his  
10 report, Note 145.

11 A Of the deposition?

12 Q Of your report.

13 A Of my report.

14 Q You buried in this Footnote 145; so I apologize for the  
15 small print. But at the bottom of the paragraph -- well,  
16 I've only got this on a page; so I want to make sure I'm  
17 looking at it in the report so I know what everybody else is  
18 looking at.

19 All right. It's going to continue on to the next  
20 page. Yes. There we are.

21 Right above -- at the bottom of the page of  
22 page 41, there's a sentence that says "As of 2014." Do you  
23 see that?

24 A Yes, I see that.

25 Q Right. It says, "As of 2014, there was also a way for

Cross-Examination - R. Ravi

1 publishers to configure priorities to put certain remnant  
2 line items which may represent changes in front of AdX,"  
3 right?

4 A Yes. I read that, yeah.

5 Q And in the next paragraph there's something you call  
6 "configurable priorities." AdX exchange line items can be  
7 set to any priority, right?

8 A Yes. I see that, yeah.

9 Q So could we look at Ravi Exhibit B, the demonstrative.  
10 So when you put this waterfall on this slide,  
11 publishers could configure this waterfall in the order they  
12 wanted it? They could put this in any order, right?

13 A Using that configurable priorities we were talking  
14 about, yes. But it was not very common.

15 Q Well, sir, you haven't done any work to determine what  
16 publishers were doing back in 2014 about how they were  
17 configuring these things, right? You don't know that?

18 A It's clear from the documents I examined that  
19 publishers were trying to find a way to do just that.

20 Q You didn't see a survey of publishers. You didn't  
21 see -- you don't know what all these -- how many publishers  
22 are we talking about, sir?

23 A Hundred, maybe thousands.

24 Q Right. You don't know what they were doing, do you?

25 A In 2014, no, yeah.

Cross-Examination - R. Ravi

1 Q All right. Now, this waterfall, before dynamic  
2 allocation and before the so-called first look, the way this  
3 worked was the publisher would set a floor price, right?

4 A The publisher would set a floor price, yes.

5 Q And the publisher could also set an expected value and  
6 then arrange the waterfall based on their expectations of  
7 value, correct?

8 A The publisher is not arranging anything; but yes,  
9 that's how the logic would be implemented. Yeah.

10 Q Right. And so before dynamic allocation and first  
11 look, whoever got the first opportunity that if someone else  
12 wanted to bid more, that person lost out?

13 A There were no bids here. These were just static bids,  
14 yeah.

15 Q Right. Static bids, right.

16 A Static bids.

17 Q They were static bids, right.

18 A Yes.

19 Q It was just static bidding, right.

20 All right. Then, after this period -- I think you  
21 said 2009 -- of first look and that's about when dynamic  
22 allocation was happening, right?

23 A Dynamic allocation, as you mentioned yourself, started  
24 before that.

25 Q Okay. First look is around 2009. Is that what you

Cross-Examination - R. Ravi

1 said?

2 A 2009 with the reimplementation, the waterfall.

3 Q All right. And then the publisher still set the price  
4 floor, right?

5 A The original price floor, yes. That's not even in this  
6 picture.

7 Q Well, there's a price floor there.

8 A That price floor for the AdX auction is determined by  
9 the historical bids.

10 Q I see. So what's missing from this chart is, before  
11 you get to DFP, the publisher has set a price floor that  
12 could be different from all the numbers on this chart,  
13 right?

14 A Yes. That's just a filter, as we were talking about,  
15 in a second-price auction, yeah.

16 Q Right. And the publisher had the choice to set that  
17 price floor as high as they wanted?

18 A Sure. Yeah.

19 Q The -- so, for example -- well, I'll come back to this  
20 example.

21 So then you said that the publisher -- you said  
22 then the waterfall there, you said, would be determined  
23 by -- I think you said historical values. Is that right?

24 A Historical revenues, yeah.

25 Q Okay. Let's understand what that means. Okay. So,



Cross-Examination - R. Ravi

1 first of all, historical revenues, does that mean the day  
2 before? the week before? the month before?

3 A The recommendation within the Google help site -- I'm  
4 just trying to answer that question.

5 Q And I apologize for interrupting. I'm not looking for  
6 recommendations; I'm look for what was actually happening.  
7 And if you don't know, please tell me.

8 Do you know whether -- when you said historical  
9 averages, do you know what historical period was being  
10 applied?

11 A No, I don't.

12 Q And the historical period being applied would be chosen  
13 by the publisher. The publisher -- if they were using  
14 historical averages, the publishers would be doing that  
15 calculation, right?

16 A Correct.

17 Q So the publisher is choosing the reserve price floor.  
18 The publisher is choosing the historical average if they  
19 apply that, right?

20 A The publisher is choosing a value for each of those  
21 exchanges.

22 Q And Google doesn't do that, right? That's not Google  
23 controlling the publisher; that's the publisher making up  
24 their own mind, right?

25 A Correct. Yeah.

Cross-Examination - R. Ravi

1 Q And so then -- and then the historical averages, as  
2 you've done here, there could be different historical  
3 averages for each firm in the waterfall?

4 A Yes. For each exchange in the waterfall, yeah.

5 Q And when AdX was first in line, in order to win the  
6 impression, it had to beat the publisher's reserve price  
7 floor and it had to beat the publisher's highest historical  
8 average, correct?

9 A Highest among all the other exchanges that were  
10 eligible, yes.

11 Q Right. And the publisher could -- just like they could  
12 put any reserve price floor they want -- could put any  
13 historical average that they wanted in there, right?

14 A Yes. As you mentioned, it is their choice.

15 Q Okay. And if AdX did not win -- if AdX said no, we're  
16 not paying what you say is the highest historical average  
17 price, then the next bidder only had to beat the reserve  
18 price, right?

19 A The next bidder is not running an auction.

20 Q So let me make sure I'm clear with you.

21 A Yes, please.

22 Q Okay. It was Google who took on the responsibility of  
23 saying we will say yes if we pay more than your reserve  
24 price floor. If we pay more, then the publisher has  
25 calculated the highest possible historical average or any

Cross-Examination - R. Ravi

1 other number they put in there.

2 And then if Google said no, okay, all that  
3 PubMatic in this example had to do was beat the original  
4 reserve price. It didn't have to beat any of the historical  
5 averages, did it?

6 A It had to fetch at least 1.06 in this example.

7 Q That -- I -- PubMatic did not have to beat any  
8 historical average in this example, did it?

9 A What do you mean by "beat historical averages"? It is  
10 other averages or --

11 Q Yeah, these -- I thought we had established this; so  
12 let's go over it again.

13 Each firm in this waterfall has an historical  
14 average on this chart. That historical average is set by  
15 the publisher.

16 A Correct.

17 Q Google has to beat the highest historical average in  
18 order to win the impression. Google says no. The next one  
19 in the waterfall, PubMatic, no longer has to beat the  
20 highest historical average, does it?

21 A The highest historical average is set by PubMatic. So  
22 it has to beat that, yeah.

23 Q No, it doesn't have to beat its own --

24 THE COURT: Wait. Don't argue.

25 MR. ISAACSON: I'm not -- I don't -- I'm sorry if

Cross-Examination - R. Ravi

1 I sound like I'm arguing. I'm trying to get the facts here.

2 BY MR. ISAACSON

3 Q Okay. Does PubMatic have to beat its historical  
4 average, or does it have to beat the reserve price?

5 A It has to beat the historical average. It has to  
6 accept the 1.06.

7 Q And then if PubMatic says no, does Index Exchange have  
8 to beat PubMatic's historical average?

9 A It has to bring 1.04.

10 Q Right. So --

11 A That's right.

12 Q Okay. So Index Exchange doesn't have to beat the  
13 PubMatic historic average, but Google does?

14 A Index Exchange is after PubMatic? That's the point of  
15 the waterfall.

16 Q Right. I think we've understood how this works now.

17 Now, you believe -- I think you said that header  
18 bidding was a competitive response to dynamic allocation,  
19 correct?

20 A To this first look advantage we were just talking  
21 about.

22 Q You referred in your report that publishers felt locked  
23 in by dynamic allocation which gave AdX the ability to  
24 compete; so header bidder -- so header bidding was born.

25 Let me rephrase that question.

Cross-Examination - R. Ravi

1           You've said in your report publishers felt locked  
2 in by dynamic allocation, and so header bidding was born,  
3 right?

4     A     That's a quote from a Google document, yes. I didn't  
5 say that.

6     Q     And header bidding didn't emerge till around 2014,  
7 right?

8     A     Yes, around that time.

9     Q     And you agree that the technical design of DFP with  
10 first look, as you have described it, made Google more  
11 attractive to advertisers who wanted to bid on the exchange,  
12 right?

13    A     Yes. I did write that, yeah.

14    Q     Okay. So, in other words, first look was something  
15 that Google's advertiser customers wanted?

16    A     I don't know that for a fact. I don't know what their  
17 advertisers want.

18    Q     Well, that's fair.

19           You agree that -- but you agree that it made the  
20 product, DFP, more attractive to the advertiser customers?

21    A     The advertiser customers were able to win impressions  
22 for cheaper because of what we just talked about. So they  
23 would have -- they would have liked that aspect of it.

24    Q     All right. Now, you agree with me that if Google was  
25 going to stop disadvantaging its rivals in the way that

Cross-Examination - R. Ravi

1 you've described, that Google would stop -- would also have  
2 to stop favoring its own advertisers?

3 A No, I would not agree with that.

4 Q Well, to get rid of first look, Google would have had  
5 to design a product that was less attractive to advertisers,  
6 correct?

7 A Getting rid of first look will make AdX less attractive  
8 to its advertisers. That's a fact.

9 Q Do you still -- PTX 551 was an exhibit that your  
10 counsel used during your examination.

11 Now, in the second paragraph it begins, "I would  
12 be remiss" -- it says in the last sentence, "Our buyers  
13 enjoy a competitive advantage from dynamic allocation  
14 because they receive first look on the inventory, which  
15 inherently provides higher CPMs from which Google benefits  
16 on the revenue share."

17 Higher CPMs means that more revenues are being  
18 generated for publishers, right?

19 A Yes. These are the more valuable impressions we were  
20 talking about, yes.

21 Q Right. So in order to have designed a system without  
22 first look, you would have to design a system where  
23 publishers make less money?

24 A It was exactly the opposite. Publishers would make  
25 more money without first look.

Cross-Examination - R. Ravi

1 Q Okay. The -- all right. Now, let's talk about last  
2 look. Depending on the publisher's preferences under last  
3 look -- well, let me back up.

4 So for last look, what we're talking about is a  
5 publisher runs a header bidding auction and then decides to  
6 submit it to DoubleClick for Publisher to see if it can get  
7 a higher bid from AdX, correct?

8 A That was the typical way it was done.

9 Q So there's already been an auction through the header  
10 bidding. There's a result. And instead of just taking the  
11 highest bid from the header bidding auction, the publisher  
12 says let's send it to DFP to see if AdX will give us more?  
13 That's what's happening?

14 A That's how they had to do it.

15 Q Right. So depending on the publisher's preferences,  
16 they could either send the impression to AdX for another  
17 real-time auction or they could send it to DFP as a  
18 guaranteed deal saying we're done. This is a guaranteed  
19 amount; we're taking the header bid?

20 A That is the sponsorship way of implementing header  
21 bidding, yes. That's a guaranteed way of doing that, yes.

22 Q Right. So the publisher, again, is choosing? The  
23 publisher has run a header bid and is choosing whether to  
24 give it over to Google to see if it can make more money,  
25 correct?

Cross-Examination - R. Ravi

1 A In the typical way of doing it, yes.

2 Q And the typical way of doing it, bottom line, no header  
3 bidding auction result is submitted to AdX unless the  
4 publisher chooses to do it?

5 A Again, that was a typical way that publishers could  
6 implement header bidding.

7 Q All right. And the other choice the publisher had was,  
8 when it submitted it to DFP, right, it didn't have to say  
9 here's the result of the header bidding auction. Can you  
10 beat it? They could set a reserve price higher than the  
11 result of the header bidding auction, correct?

12 A This is in the typical way of doing it?

13 Q Yes.

14 A Yes, they could set a reserve price that they wanted in  
15 the --

16 Q Publishers got to choose what price to put into  
17 DoubleClick for Publishers following the header bidding  
18 auction, right?

19 A Yes.

20 Q And you agree that publishers could and sometimes did  
21 inflate the header bids they put in DFP. You just don't  
22 know how often that happened, right?

23 A Yes. I do have some citations in my rebuttal report  
24 about that.

25 Q Right. And because of the way this worked, because the



Cross-Examination - R. Ravi

1 publisher -- the result of one auction now was asking if  
2 Google could beat that, last look made publishers more  
3 money, right?

4 A I just want to make sure I understand your question.

5 If publishers took the highest header bidding  
6 value that came in and inflated that --

7 Q No. I'm sorry. I confused you then. So more  
8 simplistically than that --

9 A Okay.

10 Q -- if a publisher submitted the results of its header  
11 bidding to Google and Google beat the results of that header  
12 bidding auction, the publisher made more money, right?

13 A If it gave it a higher price, yes, it made more money.

14 Q And so you've been giving the opinion that last look is  
15 not the most efficient system. It is a system that made  
16 publisher customers of Google more money, right?

17 A Not as much as a unified first-price auction that came  
18 later.

19 Q Uh-huh. So that's a unified first-price auction that  
20 Google, the monopolist, did in 2019 getting rid of first  
21 look and last look and all these other things, right?

22 A Yes. That was the last exchange to move to the  
23 first-price auction, yes.

24 Q And that was the next stage in this technology, and it  
25 made even more money for publishers. That's what you're

Cross-Examination - R. Ravi

1 saying?

2 A Many exchanges were already adopting first-price  
3 auctions, as we were saying, from 2015. So...

4 Q But let's go back to my question. Okay?

5 A Yes.

6 Q Last look was making publishers money, and unified  
7 price auction, which Google then moved to, made publishers  
8 even more money?

9 MR. VERNON: Objection. Compound.

10 THE COURT: It is. Make it simpler.

11 MR. ISAACSON: Okay.

12 BY MR. ISAACSON

13 Q You agree that last look made publishers more money,  
14 right?

15 A Than what?

16 Q Than if there was no last look, if there was just the  
17 result of the header bidding.

18 If Google didn't give publishers the opportunity  
19 to submit the header bidding result for a last look --  
20 that's what I'm talking about. If they hadn't given that  
21 opportunity, publishers would have made less money?

22 A Yes. When allowing more bids from AdX after that  
23 auction, it does make more money than not soliciting bids at  
24 all, yes.

25 Q And then you said unified price auction, which Google

Cross-Examination - R. Ravi

1 implemented in 2019, made publishers even more money.

2 That's what you said, right?

3 A Yes. That is making more money than last look, yes.

4 Q And so when you're talking about giving an opinion that  
5 last look was not the most efficient system, you were saying  
6 that Google should have done all the technological work  
7 that --

8 THE COURT: Counsel, stop hitting the lectern.

9 MR. ISAACSON: Huh?

10 THE COURT: You are hitting the lectern.

11 MR. ISAACSON: I'm sorry. That doesn't help the  
12 microphone at all.

13 BY MR. ISAACSON

14 Q So when you are saying that first -- last look was not  
15 the most efficient system and then pointed to unified  
16 first-price auction, you are saying that all technological  
17 work from unified first-price auction should have been  
18 implemented some years earlier.

19 Is that what you're saying?

20 A No, I'm not saying anything about what they should have  
21 done.

22 Q Do you know how much technological work went into  
23 building unified first auction --

24 A No, I don't.

25 Q You know it was a lot, don't you?

Cross-Examination - R. Ravi

1 A No, I don't know how much it was. Yeah.

2 Q Now, when you talked about last look being a response  
3 to header bidding, right, you agree that header bidding was  
4 a competitive threat to Google's ad server, right?

5 A I gathered that from the documents, yes.

6 Q So it's a competitive threat to Google's server ads  
7 over DFP. It's also a competitive threat to the ad  
8 exchange, right?

9 A Yes. I understood that as well, yeah.

10 Q And if your report, you did no analysis to show that  
11 Google stopped or slowed the growth of header bidding,  
12 right?

13 A The growth of header bidding by others?

14 Q Yes.

15 A I have several citations about what they tried to do.

16 Q Exactly. But what they tried to do. You didn't do any  
17 work that anything Google tried to do stopped or slowed  
18 header bidding, right?

19 A They have their own analysis of it in the various  
20 documents we even saw earlier today.

21 Q You think they have analysis that shows that header  
22 bidding was stopped or slowed down?

23 A So I don't know what you exactly mean by stopped or  
24 slowed down. Is it publishers stopping doing header  
25 bidding?

Cross-Examination - R. Ravi

1 Q Let me put it this way: Did you do any analysis  
2 quantifying the effect of any Google conduct on header  
3 bidding?

4 A Google did not do header bidding. So there is no  
5 conduct on header bidding.

6 Q Did you do any work quantifying the effect of Google's  
7 conduct by header bidding by others?

8 A They characterized some of the conducts I examined,  
9 like Poirot in particular, as one of their defenses against  
10 header bidding by other publishers.

11 Q But you don't know if Poirot succeeded, do you?

12 A Succeeded in?

13 Q In doing anything to header bidding.

14 A Their analysis suggests that it did partially.

15 Q Do you know how much?

16 A I have to look at the report, but I do have a citation  
17 about how much Poirot was able to, you know, win away from  
18 other exchanges, things like that.

19 Q And what year was that?

20 A I don't recall. It must be after Poirot was deployed.  
21 Around 2017.

22 Q All right. Do you have any -- are you aware of any  
23 evidence that Google's conduct has had any effect on header  
24 bidding since 2019?

25 A 2019, no.

Cross-Examination - R. Ravi

1 Q And you were in the courtroom when Mr. Casale said that  
2 the exchange market is hypercompetitive because of header  
3 bidding. You agree with that, don't you?

4 A Do I agree with Mr. Casale?

5 Q Yes.

6 A No.

7 Q Okay.

8 MS. WOOD: Your Honor, I'll just object.  
9 Obviously, the testimony of Mr. Casale can speak for itself.

10 THE COURT: He is not your witness.

11 MS. WOOD: Okay. Mr. Casale was my witness.

12 THE COURT: No. But --

13 MS. WOOD: Understood.

14 BY MR. ISAACSON

15 Q In your report, you also say that you looked at Google  
16 documents where Google determined that header bidding did  
17 not actually inflate header bidder amounts into DFP.

18 Do you remember that?

19 A Yes, probably in my rebuttal report.

20 Q Yes. So if you look -- you cite two documents for  
21 that, right?

22 So look at your rebuttal report. This would be at  
23 footnote -- or this would be paragraph 48. You wrote, "For  
24 example, while Google was aware of the possibility that  
25 publishers could theoretically inflate their header bidder

Cross-Examination - R. Ravi

1 amounts, they entered into DFP in 2015 to determine  
2 publishers did not do so."

3 And for that determination in 2015, in  
4 Footnote 133 you cited a document, right?

5 A Yes.

6 Q And then in Footnote 135 you cite an Amazon document?

7 A Yes, I see that.

8 Q All right. And what Amazon says in that document is,  
9 as you quoted, "Learned about some gimmicks that other  
10 header wrappers employ to advantage themselves, e.g.,  
11 inflating bids in order to force AdX to pay a premium and  
12 not just one cent more than the highest bid from other  
13 buyers since AdX pays second price."

14 In the documents that you were reviewing, Amazon  
15 was reporting about this -- that this inflation of bids was  
16 going on, right?

17 A Yes. I think this was a document where Amazon was  
18 reporting that, among 19 publishers, only one of them was  
19 attempting to do that. That is in the next footnote, I  
20 think.

21 Q All right. Sell-side dynamic revenue share. All  
22 right. Sell-side dynamic -- you describe sell-side dynamic  
23 revenue share. You did not calculate the effect of  
24 sell-side dynamic revenue on rival exchanges, correct?

25 A Not directly, yeah.

Cross-Examination - R. Ravi

1 Q Well, you didn't do it directly or indirectly, right?  
2 You didn't attempt to quantify the effect of sell-side  
3 dynamic revenue on rivals?

4 A Just sell-side dynamic revenue sharing, no.

5 Q And you agree that competing ad tech companies also  
6 have sell-side features that bury revenue shares, right?

7 A Yes. Some of them do, yeah.

8 Q Like Xandr, right?

9 A Yes, I think Xandr does that.

10 Q Like Meta?

11 A Meta probably does that, yeah.

12 Q And you agree that sell-side dynamic revenue share  
13 could increase matches between advertisers and publishers,  
14 matches that would not otherwise have happened?

15 A Yes. In the situations where the bid would have gone  
16 unsold, yes.

17 Q You agree that sell-side dynamic revenue share,  
18 something implemented by Google, expands output when it  
19 causes AdX bidders to clear floor prices at an auction that  
20 would not otherwise have been cleared, right?

21 A Yeah. I was just saying, if that floor would not have  
22 been met without sell-side dynamic revenue sharing, then  
23 sell-side DRS does increase the amount that got one.

24 Q I'm sorry. I didn't mean to interrupt.

25 A All right.



Cross-Examination - R. Ravi

1 Q You agree that documents that you reviewed show that  
2 sell-side dynamic revenue increase the overall match rate  
3 for publishers using AdX, correct?

4 A Yes, in some cases it did.

5 Q The document --

6 (Off-the-record discussion.)

7 MR. ISAACSON: PTX 697 was admitted at the end of  
8 his examination. So I'm hopeful it's in the binder that  
9 plaintiffs gave you.

10 (A binder is given to the witness.)

11 BY MR. ISAACSON

12 Q And would that document -- oh, I'm sorry. Tell me when  
13 you're there.

14 A 697?

15 Q Yes. So on the first page you see background and  
16 summary?

17 A Yeah.

18 Q And you see the first bullet point? And it's referring  
19 to dynamic revenue share up above. Do you see that?

20 A Yes. Yeah, I see that.

21 Q And it says, "Brings more revenue lift for publishers."

22 A Yes.

23 Q "Even while charging the reserve price instead of first  
24 price in the dynamic region," right? That's the Google  
25 documents show that dynamic revenue share was increasing

Cross-Examination - R. Ravi

1 revenue for publishers, right?

2 A Yes. In some cases it did, yeah.

3 Q Right. In terms of the impact on the ecosystem, which  
4 is page 3 -- that's a subtitle there at the bottom, "Impact  
5 on the Ecosystem," it says, "AdX is in competition with  
6 other exchanges, and both publishers and buyers have an  
7 option to go to other exchanges. The exchanges should care  
8 about both sides of the market and provide more features to  
9 both sides to thrive in face of competition with other  
10 exchanges."

11 Do you agree that sell-side dynamic revenue  
12 sharing was good for the ecosystem?

13 A I -- I mean, broadly speaking, dynamic revenue sharing  
14 at auction by any of the participants is good for the  
15 ecosystem.

16 Q All right. Now, return to -- so that was -- just in  
17 terms of Google's customers -- publishers and advertisers,  
18 right -- you did not reach an opinion about whether there  
19 were more losers or winners as a result of the uniform price  
20 rules, correct?

21 A No, I did not do analysis about whether there were more  
22 of winners or losers with respect to UPR.

23 Q So let's just go over those terms.

24 You've generally said that, as a result of these  
25 different conducts, there were some winners and losers

Cross-Examination - R. Ravi

1 amongst the customers?

2 A I believe I used that in the context of buy-side  
3 dynamic revenue share.

4 Q And that's also true for uniform pricing rules. For  
5 the customers, there were some winners and losers, and  
6 you've not done any analysis about whether there was a net  
7 gain or a net loss?

8 A No, I have not done that analysis.

9 Q In fact, for any of the conduct in your report, you  
10 have not attempted to quantify the harm or gain to  
11 advertisers or publishers as to whether there were more  
12 winners or losers?

13 A No, I have not done that analysis.

14 Q So when you are giving the opinion that Google's  
15 conduct advantaged itself and disadvantaged rivals, you are  
16 doing no analysis of whether Google's customers won or lost  
17 from this conduct, right?

18 A I would not characterize my report as doing no  
19 analysis.

20 Q You have reached no opinions about whether the Google  
21 conduct you described was good or bad for the customers,  
22 right?

23 A I would not characterize my opinions that way either.

24 Q You would agree that you have not given any opinions in  
25 your reports that the Google conduct that you described made

Cross-Examination - R. Ravi

1 any of the customer -- made the customers net winners or net  
2 losers?

3 A Any of the customers net winners?

4 Q The totality of the customers.

5 A The totality of the conducts' net winners or net  
6 losers?

7 Q Yeah.

8 A Yeah, I did not do that kind of analysis. Yes. I was  
9 looking at each conduct and then laying out its effects.

10 Q All right. It wasn't relevant to you in determining  
11 whether Google's conduct -- in your analysis of Google's  
12 conduct about whether it was helping its customers or not,  
13 right?

14 A It was relevant. In fact, I was talking about harm to  
15 its customers.

16 Q Okay. But then you never quantified it, right?

17 A Again, I wouldn't say I did not quantify these effects,  
18 but I don't have I think what you're trying to get at, that  
19 whole some win versus lose.

20 Q All right. Let's talk about Project Poirot. Project  
21 Poirot, named after Hercule Poirot, if that helps everybody  
22 with the spelling, the -- so you know the term. A  
23 second-price auction that was not running a clean  
24 second-price auction was sometimes called a dirty auction,  
25 right?

Cross-Examination - R. Ravi

1 A Some people have characterized it that way.

2 Q And Project Poirot determined amounts to reduce or  
3 shape bids, as you've described, for dirty auctions, right?

4 A That was the stated purpose, yeah.

5 Q And it did that for DV3 -- in DV360, right?

6 A DV360 is what did it, yeah.

7 Q Right. Project Poirot was in DV360. Project  
8 Poirot was not in Google Ads, right?

9 A It was not in Google Ads.

10 Q It was not in AdX, correct?

11 A No.

12 Q It wasn't in DoubleClick for Publishers?

13 A Yes. It was in DV360, yeah.

14 Q And you agree that the documents show that Project  
15 Poirot increased advertiser surplus, right?

16 A Yes. For some of the advertisers, yes.

17 Q Well, you agree that, in general, the Poirot documents  
18 and experiments show an increase in surplus for some of the  
19 advertisers?

20 A Yes, I agree.

21 Q Right. And that was benefiting the advertisers,  
22 correct?

23 A Yes, those advertisers for whom it did increase the  
24 surplus.

25 Q Right. And you agree that bid shading programs like

Cross-Examination - R. Ravi

1 Poirot are needed when facing auctions that don't run clean  
2 second-price auctions, right?

3 A Yes, bid shading is appropriate in non-second-price  
4 auctions.

5 Q Right. Because, for example, bidders if there's not --  
6 if you don't have the clean second-price auctions, bidders  
7 have to run experiments themselves trying to figure what's  
8 going on?

9 A Yes, that would typically be how they would try to go  
10 about doing this, yeah.

11 Q And you also agree that DV360 tested AdX for the  
12 applicability -- whether to apply Project Poirot to AdX,  
13 right?

14 A Yes. AdX did go through the test as well.

15 Q Right. And so that test, which was run -- that test  
16 was run on multiple exchanges, right?

17 A Yes.

18 Q Okay. And that test determined that the shaded bids on  
19 AdX would not increase advertiser surplus by more than a 10  
20 percent threshold, right?

21 A That is correct. 10 percent was the margin.

22 Q And that was the test that Google was running. It was  
23 running tests against auctions, looking for dirty auctions;  
24 and if that test didn't show that shaded bids would increase  
25 advertiser surplus by more than 10 percent, it wouldn't run

Cross-Examination - R. Ravi

1 Poirot; and if it did show 10 percent or over, it would run  
2 Poirot. Is that right?

3 A That's correct, yeah.

4 Q And the effect of Project Poirot varied with respect to  
5 the rival auctions, correct?

6 A Yes.

7 Q Okay. You said that it had an adverse effect on some  
8 auctions, right? But it had a positive effect on other  
9 auctions, on other exchanges, right?

10 A Yes, in terms of the amount that they won by. I assume  
11 that's what you are referring to.

12 Q The number of wins, yeah.

13 A Yes, yeah. It shifted things around, yeah.

14 Q It shifted things around because Project Poirot would  
15 shade bid if it thought you were a dirty auction, and they  
16 could lose some wins. But if you were running a clean  
17 auction, you -- the other exchanges could win more bids,  
18 right?

19 A Yeah. Sometimes that was true, yeah.

20 Q And that's what the documents that you saw showed,  
21 right?

22 A Yes, it did show some exchanges with both effects.

23 Q Right. For example, DTX 615 in your binder at 644,  
24 this is a document you've seen before, right, sir? Do you  
25 remember seeing this at your deposition?

Cross-Examination - R. Ravi

1 A Yes. Yeah.

2 Q And on 644, there's a chart of one of -- one day of the  
3 impact of Poirot.

4 THE COURT: Hold on a second. Is there any  
5 objection to 615 once we find it?

6 MR. VERNON: No objection.

7 THE COURT: All right. 615 is in.

8 BY MR. ISAACSON

9 Q All right. And you see this was very early on in  
10 Poirot. It's launched through June, completed in July.

11 A Yes, I see it.

12 Q And you can see the spin change for certain exchanges.  
13 And some went down and some went up. Improved Digital went  
14 up 6.7 percent, and AdX and AdSense went up 7 percent,  
15 right?

16 A Yes, correct.

17 Q It also says that very few customers, less than  
18 1 percent, opted out. The customers had the option of  
19 saying don't run Poirot, correct?

20 A I believe that was the case for publishers -- wait --  
21 for some advertisers, yes.

22 Q All right. And you agree that other ad tech companies  
23 had bid shading features like Poirot trying to respond to  
24 the problem of dirty auctions, right?

25 A Yes. Other ad tech companies facing first-price



Cross-Examination - R. Ravi

1 auctions did bid shading as well.

2 Q All right. Now, you mentioned optimized reserve  
3 prices.

4 You agree that sellers are incentivized to set  
5 higher reserve prices -- high reserve prices because that  
6 can lead to higher auction revenues, right?

7 A That could potentially lead to higher revenues.

8 Q But if the seller sets the reserve price too high,  
9 fewer auctions will be cleared because there might not be  
10 any bidder above the reserve price.

11 A That's correct.

12 Q So for reserve prices, there's a trade-off between  
13 increasing revenue and risking unsold auctions?

14 A Exactly, yeah.

15 Q Reserve price optimization was a feature that was  
16 seeking to raise the publisher's floor to a revenue optimal  
17 reserve price based on data from prior bidding, right?

18 A That's correct, yeah.

19 Q And you've seen Google documents showing that -- that  
20 the effect of reserve price optimization was to increase  
21 revenues for AdX buyers on -- for AdX publishers, right?

22 A Yes. It did increase the revenue for some publishers.

23 Q All right. In fact -- so just using that as an  
24 example, reserve price optimization increased revenues to  
25 publishers.

Cross-Examination - R. Ravi

1 Anytime Google successfully designed its  
2 technology to incentivize customers to choose AdX over  
3 rivals, that would give Google scale advantages, right?

4 A Anytime Google has more impressions going through its  
5 pipes, yes, it has higher scale.

6 Q So when Google makes better products, when more  
7 customers like its products, it will have scale advantages?

8 A Yes. It would accrue scale that way too, yes.

9 Q It's just true of any ad tech company. Anytime an ad  
10 tech company implements a quality improvement that customers  
11 like, that's going to be a win for that company and a loss  
12 for somebody else?

13 A Precisely. Quality improvements increase scale.  
14 That's why scale matters as well.

15 Q Now, when you gave the opinions that Google took action  
16 to hurt rivals, you were looking at specific Google conduct  
17 and not all of Google's ad tech or products at issue in this  
18 case, right?

19 A I think I might have touched all the products at issue  
20 in this case.

21 Q You think -- well, you think that the only Google  
22 products that happened from 2009 to 2019 were first look,  
23 last look, sell-side DRS, Project Poirot, and reserve price  
24 optimization?

25 A I'm sorry. I misunderstood the word "product." I

Cross-Examination - R. Ravi

1 meant by product DFP, AdX, DV360, Google Ads. They are  
2 products.

3 Q There's a lot of changes going on in all of those  
4 projects, aren't there?

5 A Indeed, yeah.

6 Q And you weren't looking at all the changes going on to  
7 determine whether -- to look at Google's conduct as a whole,  
8 were you?

9 A I don't know what you mean by "whole," but I definitely  
10 could not look at all the changes going on.

11 Q Well, how did you pick the ones you did? Why did you  
12 just -- why that handful of things -- first look, last look,  
13 uniform pricing rules. I'm forgetting one, but --

14 A Project Poirot, yeah.

15 Q Yeah, Project Poirot. Why did you just look at those?

16 A It's huge design choices. When you design an auction,  
17 the first thing you look at is how are the people put in  
18 position?

19 Well, first look and last look resulted from that  
20 fixed first position of AdX. So I think anyone looking at  
21 these conducts would easily zone in on the same set of  
22 features that I did highlight.

23 Q Did you do an analysis of the other important changes  
24 that Google made during those years?

25 A These were not changes; these were inherent features,

Cross-Examination - R. Ravi

1 right? First look and last look was not a change of  
2 anything; it was just something that existed over the whole  
3 period. Project Poirot was not a change; it was a new  
4 project for bid sharing.

5 Q I think of a new project as a change, but okay.

6 A But, you know, it is a totally new change in the way  
7 the auctions are run. So that's how I thought about it, you  
8 know. I --

9 Q Okay. Were you given the Google system and then looked  
10 and said, oh, look, Project Poirot, or did -- were you given  
11 a list?

12 A No. I -- it didn't work that way. I started by  
13 examining the complaint, thinking about the conducts that  
14 would be relevant, and then reading the PRDs. So I went  
15 down that way to try and narrow my list of things to  
16 carefully look at.

17 Q That makes perfect sense. You started with the  
18 complaint, looked at the conduct there, and picked some  
19 items from the complaint? That's what you did for your  
20 report?

21 A I picked the conducts that I think would impact -- the  
22 optimization features that would impact these conducts, and  
23 I looked at that list, yeah.

24 Q Right. You also looked at other conduct that helped  
25 customers of Google, didn't you?

Cross-Examination - R. Ravi

1 A Oh, yes, I did. Yeah.

2 Q For example, you looked at enhanced dynamic allocation.  
3 Enhanced dynamic allocation allows advertisers to compete  
4 for direct impressions, right?

5 A Enhanced dynamic allocation does -- yeah, it does  
6 increase the number of things that are sold at a higher  
7 price, right.

8 Q So that was the first change implemented by Google that  
9 allowed advertisers to compete for impressions that were  
10 being sold through direct deals at the same time as indirect  
11 deals, correct?

12 A That's right. They were taking some from the direct  
13 deals and making them available for auction.

14 Q And you agree that enhanced dynamic allocation caused  
15 publishers to earn additional revenue, right?

16 A Yes, I do. Yeah, enhanced dynamic allocation might  
17 potentially make more revenue, yeah.

18 Q Right. And you also looked at something called Project  
19 Bell, right?

20 A Project Bell was one in a sequence of many, yeah.

21 Q And I think a topic sort of came up in response to a  
22 question from the judge, multicalling. You were talking  
23 about multiple calls at different times. What's  
24 multicalling?

25 A Multicalling has -- there are two aspects here; so I

## Cross-Examination - R. Ravi

1 don't want to confound them. What I was telling Your Honor  
2 was about the same impression being available for sale from  
3 different channels. And I think she was asking me about  
4 second-pricing yourself, if I remember correctly.

5 Q Yeah.

6 A The multicalling that I talk about in my report is one  
7 where the impression is sent again and again. So these are  
8 all different requests one after the other. But the  
9 difference is that you start with the high reserve price.  
10 It didn't get you that; so you go one below. That's the  
11 multicalling that I think you are referring to in the  
12 report.

13 Q Right. So multicalling is bad for the whole system,  
14 publishers and advertisers, right?

15 A Truly, yeah. That is, broadly speaking, correct, yeah.

16 Q It tends to raise prices -- because you're sort of  
17 fishing for a higher price and seeing if someone will fall  
18 for it?

19 A Also, it slows things down, yeah. And it -- like, it  
20 adds more overhead in the whole ecosystem.

21 Q And it's also overhead for the whole system because  
22 people have to figure out that there's multiple calls going  
23 on for the same impression?

24 A If they wanted to, yes.

25 Q Yeah. And you agree that Project Bell implemented by

Cross-Examination - R. Ravi

1 Google successfully reduced multicalling?

2 A I didn't -- yes, I mean, I did -- yes, I would agree  
3 with that. Yeah.

4 Q And then there was something called Project Bernanke,  
5 which was another type of dynamic revenue share, right?

6 A Yes. That was a dynamic revenue sharing on the other  
7 side. That was the buy side now.

8 Q But it's the same principle. You're adjusting bids up  
9 and down to win more impressions for your customers?

10 A Yes, to -- yeah, to get more to clear through your  
11 exchange, if you will, yeah.

12 Q Right. And Google implemented Project Bernanke. And  
13 that increased publisher revenue, right?

14 A In some cases, it did, yeah, just like the other  
15 sell-side version, yes.

16 Q And it also increased matches between advertisers and  
17 publishers, right?

18 A I'm trying to think through this because it's a little  
19 involved. Buy-side dynamic revenue sharing, did it improve  
20 the amount of matches?

21 Q Well, you did review experimental documents from Google  
22 that showed that buy-side dynamic revenue share, global  
23 Bernanke, increased matches. Do you recall that?

24 A Yes, I do now recall. Yes. Yeah.

25 MR. VERNON: Objection, Your Honor. I know Your

Cross-Examination - R. Ravi

1 Honor said it's a matter of -- but we asked zero questions  
2 on Bernanke.

3 THE COURT: That's true. It's the first time it's  
4 come up.

5 MR. ISAACSON: Yes, Your Honor. But it goes to  
6 the point of Google's conduct as a whole. He's looked at  
7 certain conduct and wants to isolate --

8 THE COURT: I understand. You're making holistic  
9 argument.

10 So on redirect, if you want to go into Bernanke,  
11 you can. All right?

12 BY MR. ISAACSON

13 Q All right. And on issue of scale, you said that you  
14 refer to Google ad demand being available in AdX. Do you  
15 remember that?

16 A Yes, yeah. Yeah.

17 Q And you define Google demand as Google -- as being from  
18 Google Ads and DV360, right?

19 A I'm not exactly sure of the context, but if I was  
20 talking about near exclusivity, that would have been Google  
21 Ads.

22 Q But Google advertiser demand -- we're talking about  
23 advertiser demand, right?

24 A Yes, we are. Yeah.

25 Q And Google advertiser demand would include Google Ads



Cross-Examination - R. Ravi

1 and DV360, right?

2 A Yeah. Probably that's true.

3 Q And you agree that Google's buying tool, DV360, has  
4 historically been one of the major bidders into third-party  
5 exchanges, right?

6 A Yes. That's a sentence from my report, yeah.

7 Q It's also a major bidder into third-party ad networks,  
8 correct?

9 A Yes. That is true as well, yeah.

10 Q So when you were talking about the effect on scale from  
11 Google Ads demand as opposed to the other demand, you  
12 weren't looking at the totality of sharing of demand that  
13 Google does with its rivals, were you?

14 A No, I was not considering the totality of Google Ads  
15 and DV360 demand.

16 Q Right. Google -- if -- sharing advertiser demand is  
17 going to increase scale for rivals, in your opinion, right.

18 A Yes. Broadly speaking, that would be the case, yeah.

19 Q And that's what Google is doing with one product,  
20 DV360, right?

21 A Yes, it is doing that with DV360.

22 Q Right. And DV360 are some of the largest advertisers  
23 in this country, right?

24 A Yes. They include some of them, yeah.

25 Q And you've heard it said that Google Ads has made small

Redirect Examination - R. Ravi

1 and medium size --

2 A Yes.

3 Q And so what Google is doing is it's sharing the demand  
4 from the largest customers but not the smallest customers,  
5 right?

6 A That is the characterization of DV360 versus Google  
7 Ads, yes.

8 Q And did you do any analysis of how much scale Google  
9 has contributed to its rivals by sharing the demand from its  
10 largest customers?

11 A That would just be the flip side of the coin. What it  
12 did not win for itself is what was shared. So I think each  
13 one implies the other. So...

14 MR. ISAACSON: I don't have any further questions.

15 THE COURT: All right.

16 Redirect?

17 REDIRECT EXAMINATION

18 BY MR. VERNON

19 Q Okay. I'm going to try to go in order.

20 Did you offer any opinions at all in your direct  
21 or your reports about market definition?

22 A No.

23 Q Do you recall that counsel asked you some questions  
24 about market definition and a paper that you wrote? I think  
25 it was titled "First-Price Auctions in Online Display."

Redirect Examination - R. Ravi

1 Do you remember that?

2 A Yes, I recall that. Yeah.

3 Q In that paper, did you define any relevant markets for  
4 antitrust purposes or competition purposes or any other  
5 purpose?

6 A I did not define markets in that paper. That was not  
7 the point of that paper.

8 Q Did any of the conclusions in that paper depend upon  
9 the precise definition of the markets that you were  
10 reviewing?

11 A No, they do not.

12 Q And why is that?

13 A That paper was just trying to study the question of why  
14 so many exchanges were moving around 2015 from second-price  
15 auctions to first-price auctions. It was happening very  
16 rapidly in the industry. And that paper put forward the  
17 explanation that the cause was header bidding. That was the  
18 point of the paper.

19 Q And did that conclusion depend in any way on market  
20 definition?

21 A No, they do not.

22 Q Counsel asked you about quantitative analysis. Do you  
23 remember that?

24 A Yes, I do.

25 Q What quantitative analysis did you rely upon?

Redirect Examination - R. Ravi

1 A As I mentioned earlier, I relied upon analysis done by  
2 Google in its own documents that I cite.

3 Q And why did you rely on that analysis?

4 A Because I found it to be quite reliable because they  
5 were results of experiments that were trying to determine  
6 the effectiveness of these conducts. So I found that to be  
7 a reliable source to rely on.

8 Q Counsel asked you about DTX 768, which is in the middle  
9 of the black binder.

10 Let me know when you're there.

11 A Yeah.

12 I'm there.

13 Q Counsel asked you about the message in the middle from  
14 Nirmal Jayaram. Do you see that?

15 A Yes. The 123 percent.

16 Q If you look at the third line, Mr. Jayaram writes, "If  
17 my interpretations are correct, it seems like the benefit  
18 of UPR is rather marginal."

19 Do you see that?

20 A Yes, I do see that.

21 Q Can you go two messages down from Nitish Korula.

22 A Yes.

23 Q Do you know who Nitish Korula is?

24 A Yes. I think he is one of the engineers involved with  
25 the sell side, yeah.

Redirect Examination - R. Ravi

1 Q Mr. Korula responds to Mr. Jayaram, "That's  
2 misleading." Do you see that?

3 A Yes, I see that.

4 Q "A lot of the value for DBM comes from high-CPM PG and  
5 PD candidates, to which rules are not applied. If you look  
6 at DBM on AdX when restricted to open auction and private  
7 auction, you see plus 40.3 percent impressions, plus  
8 10.6 percent value, plus 7.5 percent revenue."

9 Do you see that?

10 A Yes, I see that.

11 Q So there are two numbers in these two different  
12 messages. The top number is 1 to 3 percent in Jayaram.

13 Do you see that?

14 A Yes, I see that. Yeah.

15 Q And then you see 40.3, 10.6, and 7.5?

16 A Yes, I see that too.

17 Q Which is larger? 40 or 1 to 3?

18 A 40.

19 Q Counsel also asked you if you'd reviewed other  
20 documents showing the potential size of the effects of UPR.

21 Do you remember that?

22 A Yes.

23 Q Do you recall the tree document that we looked at on  
24 your direct?

25 A Yes, I do. Yeah.

Redirect Examination - R. Ravi

1 Q And that was the document that had 40 percent  
2 multiplied by another 40 percent?

3 A Yes. 42 percent multiplied by 40 percent.

4 Q And that equals?

5 A About 16 percent.

6 Q And which is higher? 16 or 1 to 3?

7 A 16 is.

8 Q Counsel also asked you about self-preferencing. Do you  
9 remember that?

10 A Yes, if you will remind me what context it was in.

11 Q I think counsel asked you whether some of Google's  
12 conduct provides -- allows some of Google's customers to win  
13 an impression it might not have otherwise won.

14 Do you remember that?

15 A Yes. I do remember that part, yeah.

16 Q Does that mean the Google conduct that you examined is  
17 good for customers overall, meaning publishers overall or  
18 advertisers overall?

19 A Not necessarily.

20 Q And why is that?

21 A There were some conducts that I described. Like, a  
22 good example would be sell-side DRS with that last look  
23 advantage. That was a case when the publisher would have  
24 got the exact same amount of money. It was just shifting  
25 the winner from a header bidder to an AdX bidder.

Redirect Examination - R. Ravi

1           So that's an example where there would be no, like  
2 zero, benefit to the publisher. And that's an example where  
3 it does not increase the surplus for anybody.

4 Q       And why does it not increase the surplus for anybody?

5 A       Because the publisher would have sold that same  
6 impression for exactly the same price anyway.

7 Q       Let's take first look as another example. First look  
8 would allow an advertiser bidding through AdX to win some  
9 impressions that that advertiser would not have otherwise  
10 won; is that right?

11 A       First look would let AdX win an impression that  
12 potentially might just go down the pipe with no bidders.  
13 That is possible.

14           But the point in first look is that it only  
15 fetches at a price that is equal to that average price and  
16 not anything much higher. Not all of the time, just to be  
17 clear.

18 Q       Does the fact that first look allows an advertiser  
19 buying through AdX to win an impression mean that first look  
20 is good for advertisers overall?

21 A       No, that's definitely not the case. As I pointed out,  
22 the highest -- the advertiser willing to pay the highest  
23 price may not get it as a result of first look, yeah.

24 Q       Counsel for Google also asked you about something  
25 called configurable priority. Do you remember that?

Redirect Examination - R. Ravi

1 A Yes, I do.

2 Q Do you remember we discussed a document on your direct  
3 that provided some percentages for how often AdX won within  
4 the first look?

5 A Yes. I think the 53 percent that AdX was winning from  
6 DFP, yes.

7 Q What conclusion do you draw from the fact that AdX was  
8 winning 50 percent of the time through first look about how  
9 prevalent this configurable priority workaround was?

10 A I concluded from that percentage that it was not very  
11 prevalent. And just -- maybe I should just say more  
12 broadly, the fact that the publishers are trying hard to go  
13 outside of this ecosystem and get header bids itself  
14 indicates to me that it was not easy for them to implement  
15 these so-called workarounds to try and get ahead of AdX.

16 They weren't getting these real-time bids; so they  
17 went outside and got them with header bidding. So that's  
18 more broadly the point I want to make, yeah.

19 Q Counsel also asked you about who set the floors within  
20 first look. Do you remember that?

21 A Yes, I do.

22 Q Who set up the system under which AdX would bid first?

23 A DFP.

24 Q And who owns DFP?

25 A Google, of course.



Redirect Examination - R. Ravi

1 Q Who set up the system under which AdX would submit  
2 real-time bids against a floor based on static bids?

3 A AdX. Again, owned by Google, yeah.

4 Q And what was your testimony on direct about which  
5 company obtains the advantage from first look in winning the  
6 impressions with the highest value?

7 A AdX.

8 Q Counsel also asked you about how, under this first look  
9 system, AdX sometimes passes on or does not win an  
10 impression. Do you remember that?

11 A Yes, I remember that.

12 Q Why did you conclude that AdX has the advantage for the  
13 highest value impressions even though there are some cases  
14 where AdX passes?

15 A Well, when AdX passes, that's an indication that,  
16 first, there was no bidder above that floor. That also is a  
17 likely indication it was not a very valuable impression.  
18 That's why I concluded that AdX has the advantage with the  
19 more valuable impressions.

20 Q Counsel for Google also asked you about first look  
21 making AdX more attractive for advertisers. Do you remember  
22 that?

23 A Yes, I do remember that.

24 Q Did first look make AdX more attractive to advertisers  
25 because first look made AdX a better product?

Redirect Examination - R. Ravi

1 A No.

2 Q Why not?

3 MR. ISAACSON: Objection, Your Honor. He's not a  
4 quality product expert.

5 THE COURT: I'm going to sustain the objection.

6 BY MR. VERNON

7 Q Why did you say that first look allowed AdX to win some  
8 impressions that it wouldn't have otherwise won?

9 A Because of its first position in the waterfall that DFP  
10 set up.

11 Q And is that good for customers overall?

12 A Not overall, only for AdX's customers.

13 Q Counsel also asked you about bid inflation. Do you  
14 remember that in the context of last look?

15 A Yes, I do.

16 Q In response to counsel's questions, you said that you  
17 did have some discussion in your rebuttal report about how  
18 common bid inflation was. Do you remember that?

19 A Yes, I do remember that.

20 Q What were you referring to there?

21 A I was trying to find and quote evidence about the  
22 prevalence of bid inflation in the rebuttal report. And  
23 what I did find was, while it was discussed in that Amazon  
24 document that, you know, 19 publishers were being discussed,  
25 only one of them really was even thinking about trying to do

Redirect Examination - R. Ravi

1 the bid inflation.

2 And, if I recall, I think this came up also  
3 yesterday in Ms. Layser's deposition that there was not --

4 MR. ISAACSON: I would object, Your Honor.  
5 Ms. Layser's testimony was not in his report by  
6 chronological definition.

7 MR. VERNON: Your Honor, just to address this  
8 briefly. My understanding is experts can attend the trial  
9 and listen to what they hear at the trial and then have that  
10 inform their opinions.

11 THE COURT: Well, no. Under the discovery rules,  
12 you're supposed to have gotten any opinions from the expert  
13 articulated ahead of time. Otherwise, that would be expert  
14 opinions by surprise.

15 They are allowed to stay in court and listen,  
16 usually to just perhaps explain away some of the other  
17 testimony based upon what's in their expert report. But it  
18 can't be some new opinion that was not in it.

19 MR. VERNON: That's what I was trying to get to.  
20 This isn't a new opinion that he didn't disclose. As he was  
21 discussing, his rebuttal report does discuss this issue, bid  
22 inflation. And I think Professor Ravi was about to comment  
23 on Ms. Layser's testimony on this same issue.

24 THE COURT: I'm not permitting that.

25 MR. VERNON: We'll move on.

Redirect Examination - R. Ravi

1 THE COURT: That will run for both sides with the  
2 experts.

3 BY MR. VERNON

4 Q Absent bid inflation, how much additional revenue does  
5 last look return to publishers?

6 A Could you rephrase. I don't -- absent bid inflation?

7 Q If the publishers do not inflate bids, how much  
8 additional revenue does last look give to publishers?

9 A Nothing. Nothing more, yeah.

10 Q And what was your conclusion -- again, based on your  
11 reports -- about how common bid inflation actually was?

12 A Again, not very prevalent.

13 Q And what was your conclusion overall about whether last  
14 look was good for publishers in terms of revenue?

15 A Last look for publishers in terms of revenue -- well,  
16 it was not the best way, as I was discussing in the cross,  
17 to get the highest revenue for the publishers.

18 Q And the best way was?

19 A The unified first-price auction that we were talking  
20 about, yeah.

21 Q And if you were to compare a unified first-price  
22 auction on the one hand and a last look plus bid inflation  
23 on the other hand, which one would lead to more revenue for  
24 publishers?

25 A The unified first-price auction.

Redirect Examination - R. Ravi

1 Q And why is the comparison between a unified first-price  
2 auction on the one hand and the last look plus bid inflation  
3 on the other hand relevant?

4 A Well, if you took -- if you moved away from last look,  
5 the place you would get to is a unified first-price auction.  
6 And that's what happened when Google gave up first look --  
7 last look. It moved to the unified first-price auction. So  
8 it's direct chronological comparison of what happened, yeah.

9 Q Counsel also asked you about UPR. Do you remember  
10 that?

11 A Yes, I do.

12 Q And counsel also asked you if you had no opinions on  
13 whether UPR was good for customers overall, and you  
14 disagreed. Do you remember that?

15 A Yes, I do.

16 Q Why did you disagree?

17 A Because the effect of UPR for publishers, for example,  
18 is I do talk about why they did want more control. And so  
19 that was one reason I disagreed.

20 Q Counsel also asked you about sell-side dynamic revenue  
21 share, or sell-side DRS. Do you remember that?

22 A Yes.

23 Q And I think you discussed whether sell-side DRS  
24 increases publisher revenue in isolation, not as part of  
25 last look. Do you remember that?

Redirect Examination - R. Ravi

1 A Yes, I do remember that.

2 Q In what situations does sell-side DRS increase  
3 publisher revenue?

4 A When sell-side DRS allows the sale of an impression  
5 that would otherwise go unsold because the floor was high,  
6 but if Google reduced its take rate, it would be able to  
7 meet that floor. Then, as a result, that impression will be  
8 sold because of sell-side DRS. That would actually increase  
9 the number of sold impressions.

10 Q And does that situation relate to last look at all?

11 A It is completely disjointed from last look. Last look  
12 is when you already have someone who is willing to pay a  
13 certain price. And last look is a case where we already  
14 have a way of selling that impression. So when you insert  
15 that and let AdX buy it for essentially the same price,  
16 you're not increasing the number of impressions. So these  
17 are two different situations.

18 Q Let me ask you about that second situation. When last  
19 look applies, what effect does sell-side DRS have on  
20 publisher revenue?

21 A Again, nothing. It just based the same price, but the  
22 impression goes to AdX.

23 Q In your direct, what opinion did you express about  
24 sell-side DRS?

25 A Sell-side DRS, in and of itself, nothing particularly.

Redirect Examination - R. Ravi

1 Q And what opinion did you express about sell-side DRS in  
2 connection with last look?

3 A In connection with last look, I highlighted the  
4 advantage that it gave to AdX without this increase in the  
5 revenue for publishers necessarily.

6 Q Let me turn briefly to DTX 615, which is the one we had  
7 a hard time finding in defendant's binder there. It's  
8 Number 4, approximately.

9 I'm sorry. In your binder.

10 Please turn to page 644.

11 A Yes.

12 Q This is a slide about the launch impact Rasta from  
13 Project Poirot; is that right?

14 A Yes.

15 Q What is a launch impact?

16 A It is a result of launching the project.

17 Q And you'll see there's a chart on the right-hand side  
18 that how exchanges and spend change.

19 A Yes, I see it.

20 Q What does this chart show?

21 A It shows the impact on different exchanges by the  
22 launch of this project, and that would be Poirot, from the  
23 mustache.

24 And so you can see that -- yeah, as we were  
25 discussing, some of the publishers had a reduction in the

Redirect Examination - R. Ravi

1 amount that they spent compared to before launch, and the  
2 others increased down the line.

3 Q So I won't go through all of these, but what does this  
4 show about the impact of Poirot on PubMatic?

5 A Pretty at worst.

6 Q And then there's additional rows for OpenX and Rubicon;  
7 is that right?

8 A Yes. OpenX looks bad too.

9 Q And then the effect on United and Improved Digital is  
10 positive?

11 A Yes, it is.

12 Q Do you know, other than AdX, what the other largest  
13 exchanges are?

14 A Well, the others are mostly here. We don't have Xandr  
15 here, but that's one that is not here I can think of. Yeah.

16 Q So you're referring to PubMatic, OpenX, Rubicon, and  
17 Xandr?

18 A Yeah, those are some that I could think of.

19 Again, you have to be careful of what the timing  
20 of this document, yeah.

21 Q Do you know how the size of Improved Digital compares  
22 to the size of PubMatic, OpenX, or Rubicon?

23 A I don't know off the top of my head, but my guess is  
24 probably much smaller.

25 Q One other question on this document. Can you turn to



Redirect Examination - R. Ravi

1 the title slide, which is in the back of the very first  
2 page. The title slide says "Bidding in Adversarial  
3 Auctions."

4 A Yes, I see.

5 Q And there is a mustache and cookie?

6 A Yes, I see that.

7 Q What do the lines say at the bottom of this slide?

8 A Are you talking about privileged and confidential or --

9 MR. ISAACSON: Your Honor, I object. An expert  
10 witness talking about privileged and confidential  
11 designations in documents is improper.

12 THE COURT: I don't think this goes anywhere.

13 MR. VERNON: I'll move on.

14 BY MR. VERNON

15 Q Counsel asked you about the fact had you expressed an  
16 opinion, at least that we discussed in your direct, about  
17 four conducts.

18 Do you remember that?

19 A Yes, I do.

20 Q I think it was last look, first look, UPR, and Poirot?

21 A Yes, that's correct.

22 Q And then also sell-side DRS in connection with last  
23 look.

24 A Yes. And if you want to be complete, the sell price  
25 optimization.

Redirect Examination - R. Ravi

1 Q In connection with?

2 A In connection with Project Poirot, I believe.

3 Q Counsel asked you about the fact that you only focused  
4 on those four conducts with the additional conducts?

5 A Yes, I remember that exchange.

6 Q And you mentioned that those conducts involve  
7 optimization?

8 A Yes. All of them involve either optimization or the  
9 design off a system through which actions are conducted.

10 Q And why was that relevant to the question of why you  
11 focused on these conducts.

12 A As I was saying before, those were the very significant  
13 conducts that had the chance to affect the impact on revenue  
14 and on rivals.

15 Q Counsel asked you about the fact that you didn't  
16 examine all of Google's conduct across the entire Google  
17 company.

18 Do you remember that?

19 A Yes, I do.

20 Q Were you offering any opinion at all about whether  
21 Google's conduct in other businesses, like search, was  
22 either good or bad or neutral?

23 A No.

24 Q Why did you focus on these four conducts?

25 A Again, because they are very relevant to the issues in

Recross-Examination - R. Ravi

1 the original complaint, and they also have a very important  
2 optimization component where I could offer my opinion.

3 MR. VERNON: Thank you.

4 Pass the witness.

5 THE COURT: Any recross?

6 MR. ISAACSON: Very briefly, Your Honor.

7 RECROSS-EXAMINATION

8 BY MR. ISAACSON

9 Q Just to clarify -- my colleagues have offered to give  
10 me a note. Go to the podium.

11 Your testimony just now was that first look and  
12 last look give publishers nothing more if an AdX bidder  
13 beats the floor.

14 Do you remember that?

15 A I do remember that.

16 Q Okay. Now, the context here is a second-price auction.  
17 So if there's one AdX bidder who beats the floor, then they  
18 pay -- the second price is the floor, right?

19 A I agree, yes.

20 Q And what's why you say, if the AdX bidder beats -- bids  
21 more, then the publisher still does not get more?

22 A Yes. If there was exactly one AdX bidder on all the  
23 floor, then AdX pays exactly the floor.

24 Q But if there's two AdX bidders, both above the floor,  
25 the publisher does get paid for them because the second

Recross-Examination - R. Ravi

1 price becomes the price of the second bidder?

2 A Yes. I believe I mentioned that earlier, yeah.

3 Q Okay. And just looking at PTX 615, this was the Poirot  
4 document again. DTX 615 at 44. It's on your screen too I  
5 think.

6 A Okay. Thank you.

7 MR. ISAACSON: At 21 of 48, Matt.

8 THE WITNESS: Yes, it's familiar now.

9 BY MR. ISAACSON

10 Q Right. And you were looking at the individual  
11 companies. What it also says is -- over on the exchange  
12 impact bullet, the third bullet on the left.

13 A Yes.

14 Q "Overall spend, neutral. Spend in CPM on dirty auction  
15 exchanges dropped by approximately 10 percent. Spent up by  
16 6 percent on second-price auction exchanges."

17 Those would be the clean second-price auction  
18 exchanges, right?

19 A Yes.

20 Q Right. And in your opinion, if spend was going on on  
21 dirty auctions and going up on clean auctions, that's an  
22 improvement in the ecosystem, isn't it?

23 A Broadly speaking, yes, that is the case, yeah.

24 Q In your article -- you were asked about what you wrote  
25 about in your article. One of your conclusions in the

Recross-Examination - R. Ravi

1 articles where you did a lot of analysis is that "When all  
2 exchanges moved to first-price auctions, each exchange faces  
3 stronger competition from other exchanges," right?

4 A Yes. In the model in my article, that is the  
5 discussion, yeah.

6 Q That's what happened when Google moved to the united  
7 first-price auction in 2019, right?

8 A My article was not an accurate model of what happened  
9 in the real world.

10 Q Right. But when Google moved to first -- to a unified  
11 first-price auction, it would be your opinion that, after  
12 that, the exchanges faced stronger competitions from other  
13 exchanges.

14 A My article -- just to support that statement, my  
15 article argues that the fees of ad exchanges would drop to  
16 0 percent. I don't think we see a 0 percent fee today.

17 MR. ISAACSON: All right. No more further  
18 questions.

19 THE COURT: All right. Does anybody intend to  
20 call this witness again?

21 MR. VERNON: Your Honor, we do want to reserve the  
22 right to call Professor Ravi in rebuttal.

23 THE COURT: All right. Again, you're still  
24 permitted to stay in the courtroom, but do not discuss your  
25 testimony with any witness who has not yet testified.

1 All right. I think we might as well -- give me a  
2 sense as to what the rest of the afternoon is going to look  
3 like.

4 We have Mr. Zeng on the --

5 MS. WOOD: No. We are reserving Mr. Zeng for  
6 rebuttal. We're going to move, in the interest of  
7 efficiency, to Mr. Dederick. And so he will start after the  
8 break. And then if we have time left, we have some  
9 video/read-ins.

10 THE COURT: Read-ins?

11 MS. WOOD: One read-in, and then I think that  
12 read-in will take us to the end of the day; but if not,  
13 there's a video after that read-in. The read-in will be  
14 Mr. Creput that we attempted to start yesterday.

15 THE COURT: In terms of tomorrow, which is  
16 Thursday, are you going to need any read-ins tomorrow?

17 MS. WOOD: I believe Mr. Creput is our last  
18 read-in.

19 THE COURT: Excellent. That's what I need to  
20 know.

21 All right. We'll take our break until ten after.  
22 I have a couple of things I've got to do in chambers.

23 (The time is 3:53 p.m.)

24 (Brief recess taken.)

25 MR. GUARNERA: Good afternoon, Your Honor. Daniel

Direct Examination - John Dederick

1 Guarnera on behalf of the United States and plaintiff  
2 states.

3 The plaintiffs call Jed Dederick to the stand.

4 THE COURT: All right. Mr. Dederick.  
5 Thereupon,

6 JOHN DEDERICK,  
7 Having been called as a witness on behalf of the plaintiffs  
8 and, having been first duly sworn by the Deputy Clerk, was  
9 examined and testified as follows:

10 (Time noted: 4:11 p.m.)

11 MR. GUARNERA: May I proceed, Your Honor?

12 THE COURT: Yes, sir.

13 DIRECT EXAMINATION

14 BY MR. GUARNERA

15 Q Good afternoon, Mr. Dederick. Would you please spell  
16 your first and last name for the record.

17 A Sure. The first name is John, J-O-H-N; last name  
18 Dederick, D-E-D-E-R-I-C-K.

19 Q Mr. Dederick, who is your current employer?

20 A The Trade Desk.

21 Q What kind of company is The Trade Desk?

22 A The Trade Desk is a demand-side platform.

23 Q At a very high level, what is a demand-side platform?

24 A A demand-side platform is a software that ad buyers use  
25 to buy and place advertising. So it explicitly sits on the

Direct Examination - John Dederick

1 buy side of the advertising industry. Our company  
2 exclusively represents the interests of advertisers and ad  
3 buyers.

4 So, really, our clients -- advertising agencies,  
5 advertisers -- come to us to help them pick which ads to buy  
6 and to buy and place those ads.

7 Q What does the "demand" in demand-side platform refer  
8 to?

9 A It refers to being an ad buyer. It refers to creating  
10 demand. Really, a lot like economics, the conversation in  
11 our industry around the supply side and the demand side is  
12 the same. Supply side relates to the ad inventory; demand  
13 side relates to the ad buyers.

14 Q Do demand-side platforms interact with ad exchanges at  
15 all?

16 A Yes. I'm happy to explain.

17 Q Please.

18 A Okay. Demand-side platforms plug into ad exchanges,  
19 supply-side platforms, which have really merged into being  
20 the same tools, typically. Those are our principal  
21 inventory suppliers that we buy from.

22 So, you know, in that we are a media- and  
23 advertising-buying platform, what we're doing is we're  
24 assessing the supply landscape and the principal sources  
25 that we are buying from and placing ads and doing billing



Direct Examination - John Dederick

1 transactions with, building integrations with are those ad  
2 exchanges in supply-side platforms.

3 Q Is The Trade Desk a customer of ad exchanges?

4 A You could certainly say that. I mean, we are -- we are  
5 typically one of their biggest buyers. So we are buying a  
6 lot from the various ad exchanges.

7 Q Does The Trade Desk bid into Google's ad exchange, AdX?

8 A Yes.

9 Q I'd like to pull up Plaintiffs' Demonstrative A.

10 Mr. Dederick, you can either look in your binder  
11 or on the screen there.

12 Mr. Dederick, do you see the blue box that says  
13 "demand-side platform"?

14 A Yes.

15 Q Is that where The Trade Desk fits in the context of  
16 this diagram?

17 A Yes. I would say that is the only place that The Trade  
18 Desk fits into this diagram.

19 Q And what is DV360, which is listed just below the  
20 demand-side platform box?

21 A So DV360 refers to Google's demand-side platform, which  
22 is a similar technology service that Google offers to The  
23 Trade Desk, the demand-side platform.

24 MR. GUARNERA: We can pull down the demonstrative.

25 BY MR. GUARNERA

Direct Examination - John Dederick

1 Q Mr. Dederick, what is your current role at The Trade  
2 Desk?

3 A I'm the chief revenue officer at The Trade Desk.

4 Q What does your role as chief revenue officer entail?

5 A I am overseeing company revenue. I am managing the  
6 global sales organization at The Trade Desk, managing  
7 revenue operations. I sit on our executive team, which  
8 means we do, you know, business strategy, product strategy,  
9 partnership strategy.

10 But in addition, it means I spend a lot of time  
11 talking to advertisers, I mean our customers. I'm often the  
12 sort of escalation point and the face of The Trade Desk for  
13 our customers.

14 So they're, like, ad agencies, who are typically  
15 responsible for buying advertising. I'll talk to their  
16 executive teams and their management. Marketing  
17 organizations, big advertisers, their chief marketing  
18 officers, their marketing organizations. I spend lots and  
19 lots of time talking to them, advising them on buying  
20 advertising.

21 I mean, that's really all we do, is assess the  
22 supply landscape, and we offer advisory and technology to  
23 help pick and buy ads for those companies.

24 Q Can you give some examples of topics that you discuss  
25 with The Trade Desk's advertiser and ad agency clients?

Direct Examination - John Dederick

1 A Sure. We talk about -- we talk about their businesses  
2 a lot. We talk about how to help them build successful  
3 resilient businesses as, you know, advertising for them, if  
4 you're a big marketer as a gross driver.

5 So we're helping them try to build strong ads,  
6 businesses by buying the right ads. Is this ad worth it?  
7 We're trying to help them find the right ad opportunity for  
8 the right cost. We want the most value out of any given  
9 transaction. That's -- different variations of that  
10 conversation. How you should think about buying your  
11 connected television ads, your digital audio ads, your open  
12 web display ads.

13 We are having those -- we buy across all of those  
14 channels, and so we are advising them and consistently sort  
15 of evaluating how they're doing it and helping them look at  
16 things like the supply chain behind it. Is it as efficient  
17 and valuable as possible?

18 We're really just trying to get them buying and  
19 placing the most effective advertising to power their  
20 businesses.

21 Q When did you become chief revenue officer?

22 A January of this year.

23 Q What was your role before becoming chief revenue  
24 officer?

25 A Chief client officer.

Direct Examination - John Dederick

1 Q And how long did you serve as chief client officer?

2 A I believe it was about two years.

3 Q What did your role as chief client officer entail?

4 A As chief client officer, similarly, I spent time  
5 talking to our senior clients, but my management  
6 responsibility was a bit different.

7 I didn't oversee all of company revenue. I  
8 oversaw -- I sort of helped launch what is a large client  
9 sales organization or our first -- it's called sales  
10 overlays in our industry. So, like, senior overlays that  
11 would talk to the executive teams of our clients to build  
12 strategic relationships.

13 So I had a small -- much smaller, more senior  
14 team. And I would spend a lot more time in the field and  
15 with our clients in person.

16 So it's really the difference of managing all of  
17 company revenue and all of the sales and business operations  
18 versus a subset that was focused on the largest agencies and  
19 advertisers.

20 Q And just to be clear, are the clients that you worked  
21 with as chief client officer were what kind of companies?

22 A They're companies that are buying advertising. So  
23 advertising agencies and advertisers. We only represent ad  
24 buyers.

25 Q Does The Trade Desk have any clients that are not

Direct Examination - John Dederick

1     advertisers or agencies?

2     A     To the extent that other companies have come to us to  
3     buy advertising, it represents a much smaller part of our  
4     business. I wouldn't want to say that there are none, but  
5     far and away, almost all of our clients are advertisers and  
6     ad agencies.

7     Q     And why has The Trade Desk focused its business on  
8     representing advertisers and ad agencies?

9     A     We are -- our fundamental belief is that, you know,  
10    the -- if -- our ecosystem has a buy side and a supply side  
11    who have distinct interests and, in many cases, opposing  
12    interests.

13                 And so in order to service the interests of our  
14    clients effectively, we need to really declare and tell  
15    everyone what we're in it for. And we feel we're able to  
16    build more trust and credibility but also just build better  
17    product and service as a result of being really clear about  
18    what our interests are and who our clients are.

19                 So that's been a pretty clear distinction for us  
20    from the beginning. We're not a company that wants to own  
21    content. We're not a company that wants to help publishers  
22    drive higher CPMs. We're a company that wants to help ad  
23    buyers and advertisers and ad agencies buy and place  
24    valuable advertising, figure out what it's worth.

25                 Yeah. So it's really been about business

Direct Examination - John Dederick

1 strategy, go to market, but also how we think the industry  
2 should work.

3 Q How long have you been at The Trade Desk all together?

4 A About 12 years.

5 Q Did you work in digital advertising before joining The  
6 Trade Desk?

7 A Yes.

8 Q What did you do prior to joining The Trade Desk?

9 A I worked for two web publishers. I worked for the  
10 wallstreetjournal.com; I worked for webmd.com. In those  
11 jobs I was in various roles in their sales departments. I  
12 was sort of an account manager and transitioned into sales.

13 We principally just sold open web display  
14 advertising, those two publishers. And I went from there to  
15 The Trade Desk.

16 Q Overall, how many years have you worked in the ad tech  
17 industry?

18 A About -- about -- a little under 20.

19 Q Mr. Dederick, you used the phrase "open web display  
20 ads" a moment ago.

21 What does "open web display" mean?

22 A Open web display refers mostly to the banner ads that  
23 appear on desktop websites. So a lot of -- a lot of the  
24 people in our industry refer to it as display, but we're  
25 talking about a standardized series of ad formats that many

Direct Examination - John Dederick

1 of the sort of web publishers rely on. So the 300-by-250s,  
2 the 728-by-90s. The standardized series of formats that are  
3 mostly still or slightly animated banner ads.

4 Q And, Mr. Dederick, you just used some numbers. Can you  
5 explain to the Court what those numbers refer to?

6 A Sure. Those are ad specifications, so like pixel  
7 sizing. So in order to do advertising at scale, you need to  
8 have specifications so that you have some level of  
9 standardization. So an ad creative can work in lots of  
10 different formats and publishers, and so that's what I was  
11 referring to.

12 Q Can advertisers use demand-side platforms to purchase  
13 open web display advertising?

14 A Yes.

15 Q Do demand-side platforms help advertisers determine how  
16 much to bid for an open web display impression?

17 A Yes.

18 Q At a high level, what factors affect how much an  
19 advertiser bids for a given open web display ad impression?

20 A There's really a lot of metadata that we're assessing.  
21 But easy examples are going to be things like what site is  
22 the ad on? What time of day is it? What device is the ad  
23 appearing on? Is this traditionally a highly viewable ad  
24 placement? What kind of targeting is associated with this  
25 ad placement?

Direct Examination - John Dederick

1           These are all variables that we use to value how  
2 much we think it's worth for an advertiser. But we're also  
3 having to build a lot of technology to constantly assess the  
4 marketplace and add a level of artificial intelligence to,  
5 you know, automate because there's just so much metadata  
6 that we're assessing all of the time to help figure out what  
7 an advertiser should bid.

8       Q     What are some of the most commonly used demand-side  
9 platforms in the market today?

10      A     The -- I would say the two most commonly used  
11 demand-side platforms are DV360, Google's demand-side  
12 platform, and The Trade Desk.

13      Q     Are there other on demand-side platforms as well?

14      A     Yes.

15      Q     How do -- excuse me.

16           Can one advertiser use more than one demand-side  
17 platform at a time?

18      A     They can. It requires resourcing. I mean, using a  
19 demand-side platform is largely a self-service enterprise,  
20 or that's certainly how most of our clients use us and what  
21 most clients want.

22           It requires training. It requires contractual  
23 relationships. It requires an ongoing, you know,  
24 implementation of a software at a business is what -- it's a  
25 B2B software, essentially. And so, you know, almost all of



Direct Examination - John Dederick

1 our clients do use multiple demand-side platforms.

2 Q Why is that?

3 A Every one of our clients has a contract with Google.

4 Q So do The Trade Desk --

5 A To the best of my knowledge.

6 Q Do The Trade Desk's clients use DV360 as an alternative  
7 or simultaneously use DV360 with The Trade Desk?

8 A Yes, a lot of them do.

9 Q Do some advertisers use The Trade Desk as their only  
10 demand-side platform?

11 A Typically, no. We don't have access to major pools of  
12 inventory that advertisers really need to show up on or it's  
13 usually critical for them. YouTube is one. There's  
14 inventory on Amazon that's exclusively available through  
15 their DSP.

16 So, typically, an advertiser who works with The  
17 Trade Desk will also work with those other demand-side  
18 platforms to have access to this highly valuable inventory,  
19 like YouTube.

20 Q And just to be clear, Mr. Dederick, what is YouTube?

21 A YouTube, user-generated content video site, largest  
22 video ad network that I'm aware of. And owned by Google.  
23 You know, most advertisers and agencies that I work with buy  
24 ads on YouTube.

25 Q And can The Trade Desk buy advertising on YouTube?

Direct Examination - John Dederick

1 A No.

2 Q Why not?

3 A Google has restricted the access of The Trade Desk and  
4 third-party demand so that the only demand-side platform  
5 that has access to YouTube is DV360.

6 Q And DV360 is Google's demand-side platform?

7 A Yes.

8 Q Can The Trade Desk buy ad inventory on Google's search  
9 engine?

10 A No.

11 Q Why not?

12 A It's the same reason. Search is bought exclusively  
13 directly from Google. You know, the -- I'm happy to say  
14 more about this, but I don't need to.

15 Q If you could explain a little bit more about why The  
16 Trade Desk can't buy search ad advertising on Google's  
17 search engine.

18 A Sure.

19 So search advertising is really exclusively  
20 available directly from Google. So -- and, you know, it  
21 really is the most sought-after ad placement. It's probably  
22 the only place in the whole ad industry where there's more  
23 demand than there is supply in search.

24 I mean, if you think about it from the perspective  
25 of an advertiser, you know, you have a prospective customer

Direct Examination - John Dederick

1     typing in "I want to buy a TV." And so Samsung, LG, they  
2     want to show up at that moment. That's, like, the very  
3     final moment before a purchase, often.

4             So, you know, search is almost always the  
5     cornerstone of a client media plan. And so they're going to  
6     go -- they're going to have to go directly to Google,  
7     really, to participate in search.

8     Q     Can The Trade Desk purchase open web display ads  
9     through ad exchanges?

10    A     Yes.

11    Q     Does Google's DV360 demand-side platform have any  
12    advantages over The Trade Desk with respect to buying open  
13    web display ads?

14    A     Yes.

15    Q     What are some of those advantages?

16    A     Well, there's a major data advantage. I mean, Google  
17    arguably sits on the most valuable data asset in the world.  
18    They have, like, 2 billion log-ins. Increasingly in the  
19    advertising industry, log-in data is the most valuable data.  
20    And so, you know, Google search data and various forms of  
21    data are available for free for use of -- in targeting in  
22    the DV360 DSP.

23             And then there's, you know, the connectivity  
24    across exclusively owned inventory sources like YouTube.  
25    And while YouTube is a video network, the ability to do

Direct Examination - John Dederick

1 things like target across multiple control frequency or  
2 measure across both open web display and other formats is a  
3 major advantage. And, you know, when there's resourcing  
4 involved, clients want to do -- they want to work with as  
5 few platforms as possible, for sure.

6 Q How would you describe The Trade Desk's strength in  
7 open web display ad buying versus other types of digital  
8 ads?

9 A I would say that it's -- we've needed to invest in  
10 other channels, really, to find growth. We have not been as  
11 competitive in the display landscape as we have been in  
12 other channels like connected television, for example.

13 Q Why is that?

14 A The display marketplace is very much typically accessed  
15 through either Google directly, through GDN, their ad  
16 network, or DV360. They are far and away, typically, the  
17 most sought-after and most -- best-performing in open web  
18 display.

19 And a lot of that really comes from the position  
20 that they have with the publisher-side ad server where, you  
21 know, there's just a lot of advantage to owning  
22 publisher-side ad server, owning the AdX ad exchange.

23 MS. DUNN: Your Honor, I'm going to object based  
24 on Your Honor's ruling in the motion in limine. I think  
25 we're getting close to the line; maybe we're over the line

Direct Examination - John Dederick

1 with respect to his opinion about Google's position.

2 THE COURT: I don't think he's crossed the line  
3 yet.

4 MS. DUNN: Thank you, Your Honor.

5 THE COURT: So overruled.

6 BY MR. GUARNERA

7 Q You can finish your answer, Mr. Dederick.

8 A Okay. So we have not seen nearly the kind of growth in  
9 display advertising, while it has been a channel that we've  
10 bought for a long time. But we've seen -- from what we hear  
11 from our clients, from my experience listening to our  
12 clients and participating in the investments --

13 MS. DUNN: Objection, Your Honor.

14 THE COURT: That's sustained. That's going to be  
15 hearsay. Let's move on.

16 MR. GUARNERA: Okay.

17 BY MR. GUARNERA

18 Q Mr. Dederick, in the last five years has The Trade Desk  
19 tried to improve its performance in the open web display  
20 space?

21 A Yes.

22 Q Have those efforts been successful?

23 A Not meaningfully, no.

24 Q Why not?

25 A We haven't been able to -- we haven't been able to grow

Direct Examination - John Dederick

1 in display at the rates that we have in other channels we've  
2 invested in. Our clients are typically working with Google  
3 on open web display.

4 Q You mentioned a moment ago that Google's DV360  
5 demand-side platform was performant or best-performing in  
6 open web display. Is that because DV360 is a better quality  
7 demand-side platform than independent DSPs?

8 A No, I don't think so.

9 Q And so why is DV360 best-performing?

10 A Well, I did mention that it's both the GDN ad network  
11 placements, where it's not all bought directly through  
12 DV360. Open web display can be bought from Google in a  
13 magnitude of ways.

14 And so the combination of having all of the  
15 associated metadata from the publisher side, from the search  
16 side, and having the placement as the publisher ad server  
17 and ad exchange, it just -- it gives tremendous advantage to  
18 buying and placing online display ads if you're working  
19 directly with Google.

20 Q Mr. Dederick, we've been talking about demand-side  
21 platforms. Can advertisers also buy open web display ads  
22 through ad networks?

23 A Yes.

24 Q What is an ad network?

25 A An ad network is typically a combination of websites

Direct Examination - John Dederick

1 that's put together to create more ad liquidity or more  
2 supply. It's typically not programmatic -- or RTB spec is  
3 sometimes a part of ad networks, but it's not a defining  
4 characteristic.

5 Typically, ad networks are going to be based on  
6 arbitrage pricing models, where there's some level of  
7 packaging of inventory that meets some targeting criteria  
8 for a buyer. And typically it's going to be priced on a  
9 flat -- on a fixed basis, either a fixed outcome like a  
10 click or a fixed CPM basis. And so usually, if you're a  
11 buyer, you don't know how much is going to the publishers  
12 from an ad network and how much is going to whoever owns the  
13 ad network.

14 Q Does Google have an ad network?

15 A Yes.

16 Q Is Google's ad network sometimes called Google Ads?

17 A Yes, or GDN.

18 Q What are some examples of advertiser ad networks other  
19 than Google Ads?

20 A There used to be many more. There -- you know, I think  
21 there are companies who are arguably ad networks today, like  
22 Criteo. But, you know, there was a time not long ago when  
23 there were companies like Rocket Fuel or AdRoll who were  
24 large ad networks who operated in the open web display space  
25 a lot. There are many fewer now.

Direct Examination - John Dederick

1 Q Are advertiser ad networks and demand-side platforms  
2 the same thing?

3 A Not at all.

4 Q Why not?

5 A An ad network, as I said, is really a -- it's an  
6 accumulation of ad inventory from multiple -- from multiple  
7 publishers, from multiple sources. And typically, it's  
8 characterized by those arbitrage pricing models that I  
9 mentioned. They are thought of as, you know, typically  
10 sitting on the supply side. I mean, those ad networks are  
11 not buy-side tools or technology, typically.

12 And so a demand-side platform is really -- in our  
13 view, explicitly a set of buy-side tools that ad buyers use  
14 to decide which ads to pick that demand-side platform  
15 shouldn't care, shouldn't have an interest in which ad an  
16 advertiser or an agency picks beyond wanting to represent  
17 their interests, in our view.

18 And so, you know, an ad network will typically not  
19 have that same setup, that same pricing model. They won't  
20 abide, often, by the RTB standards that a demand-side  
21 platform does. So they're different.

22 Q And to be clear, advertisers can buy ads through ad  
23 networks, correct?

24 A Yes, they can go directly to ad networks to buy ads.

25 Q Are there differences in the types of advertisers that



Direct Examination - John Dederick

1 use demand-side platforms versus ad networks?

2 A Yes. I mean, largely because a demand-side platform,  
3 as I mentioned, is -- it requires some investment. It  
4 requires some expertise. Usually it's a self-service buying  
5 tool.

6 A demand-side platform is about an advertiser  
7 coming in with certain knowledge of their business and  
8 applying that to what ads they choose to buy. That usually  
9 requires a robust marketing department. Often it requires  
10 agency relationships where they'll employ people who are  
11 capable of using demand-side platforms.

12 So most demand-side platform use is being done by  
13 what I think of as larger advertisers or the Fortune 500  
14 advertisers. Ad networks are often much more sort of  
15 simple. Put in a budget, put in very brief targeting  
16 criteria, and hit go. And it's much more -- it doesn't  
17 require the same investment level.

18 So I would say that often smaller advertisers buy  
19 from ad networks more than that they would use demand-side  
20 platforms.

21 Q Are there differences in how demand-side platforms and  
22 ad networks use data to buy ads?

23 A Yes.

24 Q What are some of those differences?

25 A Well, again, a demand-side platform is about leveraging

Direct Examination - John Dederick

1 buy-side interests and deploying buy-side data. An  
2 advertiser is going to come to us and tell us about their  
3 most valuable customers. They're going to expose a lot  
4 about their business so that we can help them formulate a  
5 strategy about what to buy. And then we're going to put  
6 that data to work for them in a way that they can trust  
7 won't come back to bite them. It will represent their  
8 interests.

9 Usually, in an ad network, the data that is being  
10 applied is derived from the supply side. And it's typically  
11 being used to create whatever targeting is available on that  
12 ad network. But, you know, you're not usually going to see  
13 advertiser data being used or buy-side data being used to do  
14 targeting in an ad network. Again, it very much sits on the  
15 supply side, in my view.

16 Q When The Trade Desk pitches its demand-side platform to  
17 potential advertiser clients, does it consider itself to be  
18 competing against ad networks for that business?

19 A No.

20 Q Does The Trade Desk consider itself to be competing  
21 with advertiser ad networks for those advertisers' business?

22 A I'm sorry. I didn't understand that question.

23 Q I'm sorry. I'll repeat it.

24 Does The Trade Desk consider itself to be  
25 competing with advertiser ad networks for advertisers'

Direct Examination - John Dederick

1 business?

2 A No.

3 Q So we've talked, Mr. Dederick, about DSPs and ad  
4 networks. And I'd like to ask a few questions now about ad  
5 exchanges.

6 Do DSPs bid into ad exchanges to buy open web  
7 display advertising on the open web?

8 A Yes.

9 Q Does The Trade Desk offer its own ad exchange?

10 A No.

11 Q Does The Trade Desk bid into multiple ad exchanges?

12 A Yes.

13 Q Does The Trade Desk buy open web display advertising on  
14 Google's AdX ad exchange?

15 A Yes.

16 Q Does The Trade Desk view ad exchanges as competitors to  
17 its demand-side platform?

18 A Absolutely not.

19 Q Why not?

20 A Again, I mean, this is -- we are very clear about whose  
21 interests we serve. We serve the interests of buyers. An  
22 ad exchange and a supply-side platform should be  
23 representing interests of the publishers. They're there to  
24 help optimize yields. And they should be there, I think, to  
25 help represent the interests of publishers.

Direct Examination - John Dederick

1           These are opposing interests; so it's very  
2           important to me that -- and how we go about our business  
3           that we don't betray the interests of the clients that we  
4           serve. But it also helps us have trusting relationships  
5           across the industry. And it matters in our relationships  
6           with publishers that we're honest and open about what we're  
7           after.

8       Q     From your perspective as someone who helps advertisers  
9           carry out digital ad campaigns, what characteristics are  
10          important for you in evaluating an ad exchange?

11      A     I'm sorry. Would you repeat that question.

12      Q     From your perspective as someone who helps advertisers  
13          carry out their digital ad campaigns, what are some  
14          characteristics of ad exchanges that are important to you?

15      A     Well, what -- what we want on the buy side and what  
16          the -- I talk to the most -- many of the most sophisticated  
17          advertisers and ad buyers, I think, in the world. And they  
18          want a fair and transparent auction. They want transparency  
19          into their supply chain, meaning where are their media costs  
20          going? They want to know what they're buying, put simply.

21               And so when it comes to what is happening in an  
22          auction environment being hosted by an exchange or how costs  
23          are being taken from the supply chain by an ad exchange or  
24          an SSP, we want to understand how to transact. We want to  
25          know what the rules are. And so those would be the

Direct Examination - John Dederick

1 qualities that we would want in a fair marketplace.

2 Q Has The Trade Desk raised concerns with Google about  
3 the fairness of AdX's auctions?

4 A Yes.

5 Q What were some of those concerns?

6 A The Trade Desk has raised concerns over a number of  
7 issues. I mean, there's a longstanding history in the  
8 relationship between The Trade Desk. And AdX is really a  
9 critical supply partner for us. So I wouldn't begin to  
10 characterize every one of the requests.

11 But I would say that auction transparency, I would  
12 say that, you know, when -- especially with regard to the  
13 conversation around open bidding and header bidding, we had  
14 a lot of conversations with Google about what we thought  
15 would be fair and transparent practices in how The Trade  
16 Desk could participate in auctions. So, typically, it's  
17 around auction integrity and it's around supply path  
18 transparency.

19 Q We'll come back, Mr. Dederick, to header bidding and  
20 open bidding in a few minutes.

21 Did anything change about the AdX auction as a  
22 result of your conversations with Google?

23 A No.

24 Q Is The Trade Desk able to avoid bidding into AdX  
25 altogether?

Direct Examination - John Dederick

1 A No.

2 Q Why not?

3 A Well, we want to be a competitive demand-side platform.  
4 And if you don't have access to some critical scale, which  
5 AdX has critical scale, especially with open web display,  
6 right.

7 So if we're trying to be a competitive demand-side  
8 platform, we would not be competitive without access to AdX.

9 Q Based on your experience, which ad exchange offers the  
10 most open web display ad inventory for sale?

11 A AdX.

12 Q Does the volume of display ad inventory offered on an  
13 exchange matter to The Trade Desk?

14 A Absolutely.

15 Q Why?

16 A Well, for a buyer, having the most choice possible is  
17 an advantage. So you want to have as many options with as  
18 much metadata as possible. And so, you know, we will  
19 prioritize our connectivity with supply-side platforms and  
20 ad exchanges.

21 One of the most important criteria that we'll  
22 evaluate is size and scale, which we often talk about in  
23 forms of queries per second. How many do they have? How  
24 many unique publisher relationships or how many publisher  
25 relationships do they have? So yes, scale is critical.

Direct Examination - John Dederick

1 Q I think you mentioned this a moment ago, but just to be  
2 clear.

3 Is there a relationship between the scale of an ad  
4 exchange and the data that that exchange has access to?

5 A Yes.

6 Q And can you expand on that.

7 A Well, an ad exchange and a supply-side platform should  
8 be seeing and hosting information about publisher ad  
9 opportunities and passing data that's associated with that;  
10 so the more publishers and ad opportunities and ad exchange  
11 an SSP has.

12 But, significantly, if there are other aspects of  
13 a connected stack that associate more data with those same  
14 users, same publishers, or same opportunities, you begin to  
15 create an incredible data advantage. So, you know, data is  
16 currency in many aspects of our industry.

17 THE COURT: I'm just curious. If scale is  
18 critical and if, as a result of this litigation, Google were  
19 blown apart -- so you had no longer one great big mega point  
20 where all this data is collected, but it's spread out among  
21 10, 15, 20, 30 little entities -- would that make it more  
22 difficult?

23 THE WITNESS: For a buyer?

24 THE COURT: Yeah.

25 THE WITNESS: You know, it's hard to -- it's hard

Direct Examination - John Dederick

1 to say. I don't think that the open web publishers would  
2 let their ads go unsold. And so the hardest thing would be  
3 the lack of a publisher ad server as a viable alternative to  
4 DFP. I don't know of any. And so that is just, in direct  
5 answer to your question, the thing that I would wonder what  
6 would happen.

7 But as it relates to AdX, there are other SSPs.  
8 And so I don't think that open web display publishers would  
9 sit around for long before they began leveraging alternative  
10 technology.

11 THE COURT: Okay.

12 BY MR. GUARNERA

13 Q Mr. Dederick, does The Trade Desk have to do any  
14 technical work in order to be able to bid into an ad  
15 exchange?

16 A Yes.

17 Q And at a high level, what does that entail?

18 A Integration work, ongoing support, technical support of  
19 integration, partnership support. But, I think, importantly  
20 we need to license data centers and we need to support all  
21 of the data that comes in through the ad requests that we're  
22 getting from SSPs.

23 So, you know, the more ad requests we get, the  
24 more expensive it is for us because we're not necessarily  
25 buying ads at the same rate that we're getting more



Direct Examination - John Dederick

1 requests. So it is costly for us to evaluate as many  
2 impressions as we do.

3 Q Is the scale of an ad exchange something The Trade Desk  
4 considers when deciding whether to integrate with an ad  
5 exchange?

6 A Yes.

7 Q Does The Trade Desk integrate with exchanges that fall  
8 below a certain threshold of scale?

9 A Well, there are multiple vectors that we would  
10 evaluate. Scale is among the most critical. But if we're  
11 not seeing unique value and we're seeing low scale in --  
12 there are a number of supply partners that we're not  
13 integrated with for those reasons, yeah.

14 Q Do ad exchanges charge fees to the advertisers that use  
15 The Trade Desk to bid into ad exchanges?

16 A I'm sorry. Say that question again.

17 Q Do ad exchanges charge fees to the advertisers that use  
18 The Trade Desk to bid on ads?

19 A So ad exchanges do charge fees that come out in the  
20 digital -- in the supply chain of an ad. So you could say  
21 that they charge that fee to a publisher or you could say  
22 they charge that fee to the advertiser. At the end of the  
23 day, it's a part of that supply chain for a given ad. But  
24 yes, they do charge a fee within that supply chain.

25 Q How do those exchange fees affect The Trade Desk's

Direct Examination - John Dederick

1 advertiser clients?

2 A They will -- well, that aspect of their supply chain is  
3 important. So, you know, the easy answer is we want the  
4 most efficient, most effective supply change possible behind  
5 every ad opportunity.

6 So if the costs that are coming in from the ad  
7 exchange or the SSP are either too high or they're not  
8 creating value, that is -- that is harming the advertiser's  
9 ability to create value with the ads they buy, to create --  
10 to do better targeting, to buy more ads that would create  
11 growth for their business.

12 So, for me, the question is really is the fee in  
13 the supply chain taken by an ad exchange or an SSP worth it  
14 in the supply chain. So, you know, the advertiser has to  
15 account for that.

16 Q Do ad exchanges offer ad fraud protection as part of  
17 their services?

18 A Sometimes they do.

19 Q Are there tools in the market that help advertisers  
20 address the risk of ad fraud?

21 A Yes.

22 Q At a high level, what are -- how do those tools work?

23 A There are a host of companies who do different kinds of  
24 integrations. If they're going to work explicitly with an  
25 ad exchange or an SSP, what they'll do is they'll typically

Direct Examination - John Dederick

1 vet their inventory for different forms of invalid or  
2 low-quality traffic and try to sort through those.

3 There's different controls applied by demand-side  
4 platforms to do the same thing. The Trade Desk applies a  
5 set of standards across SSPs and exchanges where we've  
6 effectively eliminated invalid traffic from what we buy.

7 And then there are also -- you know, some  
8 advertisers will deploy additional tools and services after  
9 the fact. So that would be called more like postbid tools  
10 that would be more appended on the creative tagging side.

11 Q And typically these tools are offered by companies  
12 other than ad exchanges?

13 A Yes.

14 Q How would you compare the ad fraud protections on  
15 Google's ad exchange, AdX, versus ad fraud protections on  
16 other ad exchanges?

17 A Well, I mean, in that ad fraud for me is a broad topic  
18 that includes things like invalid traffic but also  
19 low-quality made-for-advertising sites.

20 Made-for-advertising sites are a huge problem in open web  
21 display advertising.

22 Effectively, it's the idea that some websites will  
23 just ram more ads on a page that aren't viewable or aren't  
24 seen or they'll rotate them quickly. And advertisers will  
25 buy them. And they won't get any value, but they will never

Direct Examination - John Dederick

1 know.

2 So we see -- and this has been validated by  
3 third-party research from companies like Atalytics, that  
4 Google and AdX are the worst purveyors of MFA advertising in  
5 the ecosystem. The Atalytics study showed that that was the  
6 case by a factor of 5.

7 MS. DUNN: Your Honor, objection to the hearsay.

8 THE COURT: Sustained.

9 MS. DUNN: Thank you.

10 BY MR. GUARNERA

11 Q Mr. Dederick, does The Trade Desk offer a service  
12 called Open Path?

13 A Yes.

14 Q What is Open Path?

15 A Open Path is The Trade Desk's program to plug directly  
16 into, typically, the publisher ad server. So Open Path is a  
17 direct line into publisher -- typically ad server for an  
18 advertiser.

19 So we're offering that service -- you know,  
20 usually Open Path will be applicable to larger -- it's  
21 really a pretty small number of larger publishers who have  
22 the sophistication to manage their own yield practices. And  
23 so it's another attempt from The Trade Desk to create a more  
24 efficient supply chain for advertisers.

25 THE COURT: So that bypasses an exchange?

Direct Examination - John Dederick

1 THE WITNESS: It does. That's right. What it  
2 will do is plug into an ad server. So most of the time, and  
3 almost all the time, it basically plugs directly into DFP,  
4 the Google publisher ad server, but bypasses the exchange.

5 BY MR. GUARNERA

6 Q Is Open Path an ad exchange?

7 A No.

8 Q Why not?

9 A It -- we don't offer -- it's not a service offered to  
10 publishers to help serve their interests or optimize yields.  
11 It's explicitly there to serve the interests of our buyers  
12 to create a better supply chain.

13 To the extent that publishers are interested in  
14 participating, it's because they know The Trade Desk  
15 represents demand. But we don't offer tools to publishers  
16 to help them increase sell-through rates or increase CPMs.  
17 We are there to get the best cost for the buyer and to get  
18 the most value for the buyer.

19 So, you know, in that the sell side of our  
20 industry should be there to service the interests of  
21 publishers, absolutely not.

22 Q Does Open Path conduct auctions for ad inventory?

23 A No.

24 Q How does the volume of ad impressions available through  
25 Open Path compare to the volume of ad impressions available

Direct Examination - John Dederick

1 through ad exchanges?

2 A It's not -- we -- it's somewhat confidential  
3 information, but I'll share that it's much more -- it's  
4 minimal by comparison.

5 Q In the Trade Desk's experience, do advertisers consider  
6 Open Path a viable alternative to bidding through ad  
7 exchanges for open web display ads?

8 A No. Absolutely not.

9 Q Why not?

10 A It's too small.

11 Q Have any of The Trade Desk's advertiser customers  
12 decided to use Open Path exclusively to buy their digital  
13 open web display ads?

14 A No.

15 Q Mr. Dederick, I'd like to ask you a few questions now  
16 about the auction process.

17 A Yep.

18 Q Does The Trade Desk take into account the rules of an  
19 auction when it helps an advertiser determine how much to  
20 bid for an ad?

21 A Yes.

22 Q How does it do that?

23 A Well, we assess everything we know about the supply  
24 path behind an ad, including what are the auction mechanics  
25 that we've seen from a given publisher to a given exchange,

Direct Examination - John Dederick

1 different auction dynamics, changing auction dynamics.

2           It feels like so much of sort of the arms race of  
3 our industry has been around changes to the auction dynamics  
4 from the supply side of our industry; so we're having to  
5 constantly assess and build capabilities to -- yeah, to  
6 address those auction dynamics.

7 Q     Is it always the best strategy for an advertiser to bid  
8 the highest price it's willing to pay for an ad?

9 A     No.

10 Q     Why not?

11 A     Well, simply, it's because the advertiser might be able  
12 to get that for less. So relative to a given ad  
13 opportunity, there -- you know, we may believe that an  
14 advertiser can get an ad for less than they are willing to  
15 pay. Part of what we do is help them pay less if they can,  
16 serving their interests.

17           And things like first-price auction dynamics make  
18 it such that you need to be careful because, under  
19 first-price auction dynamics, you're going to pay what you  
20 bid. And that's the understanding that we have of  
21 first-price auctions.

22 Q     Even in second-price auctions, does The Trade Desk  
23 advise advertisers categorically to bid their highest  
24 maximum willingness to pay?

25 A     No.

Direct Examination - John Dederick

1 Q Why not?

2 A Because, again, we may find the opportunity to pay less  
3 for that ad than the advertiser is willing to pay.

4 Q Is the practice of bidding less than an advertiser's  
5 full willingness to pay called bid shading?

6 A That's one of the terms that has been used for that,  
7 yes.

8 Q Are there other terms?

9 A That's the most popular term. We haven't -- yeah, we  
10 have a tool called predictive clearing, which is our form of  
11 that at The Trade Desk.

12 Q In your experience as an ad buyer, are publishers able  
13 to change their price floors from one auction to another?

14 A So, typically, that would be an ad exchange or an SSP  
15 that would be changing price floors, but yes. So dynamic  
16 price floors are associated with the ad exchange or the SSP  
17 responding to the bid dynamics coming from DSPs in the  
18 demand side and shifting the price floor; so the minimum  
19 amount that a publisher is willing to sell the ad for. So  
20 it's typically a supply-side technology that exchanges or  
21 SSPs would offer.

22 Q And under dynamic price floors, can the SSP change its  
23 price floor in response to bids it's received in the past?

24 A Yes. I mean, they're looking at historical data and  
25 often seeing how much buyers are willing to pay for similar



Direct Examination - John Dederick

1 or the same ad impressions.

2           So if they see The Trade Desk willing to buy an ad  
3 for more than the price floor, they can respond by raising  
4 the price floor to try to, again -- you know, ideally what  
5 they're doing is they're trying to optimize yield for a  
6 publisher. But whether or not that money ends up going to a  
7 publisher, I think, is sometimes -- is one of the things  
8 that we assess when we think about the value of a supply  
9 chain.

10 Q And so is dynamic price flooring something The Trade  
11 Desk takes into account when determining whether and how  
12 much to bid shade?

13 A Yes.

14 Q Changing gears, Mr. Dederick, for a moment, apart from  
15 open web display, what other types of ads are available for  
16 purchase through The Trade Desk?

17 A The Trade Desk tries to plug into all available ad  
18 formats that are connected via RTB standards. So connected  
19 television is a major channel for The Trade Desk. Digital  
20 audio, digital out-of-home, mobile display ads, mobile  
21 video, online video are some of the channels that we operate  
22 in.

23 Q When you advise advertisers on their digital ad  
24 campaigns, do you discuss the pros and cons of using  
25 different types of digital ads?

Direct Examination - John Dederick

1 A Yes.

2 Q What kind of factors do you consider in advising  
3 advertisers to choose one kind of digital ad over another  
4 kind?

5 A Well, they're very different. A connected television  
6 ad is -- we think of it as the living room, large format.  
7 It's extremely expensive. You'll have 30 seconds to tell  
8 your story. So that's a very different format than an open  
9 web display ad, which is more often static or a slightly  
10 animated box on a screen.

11 So depending on what the advertiser's goal or  
12 their position is, sometimes an advertiser wants to optimize  
13 toward getting efficient visits to their website. And so  
14 being able to click on a banner ad and get to the website  
15 quickly is important. You can't click on a television ad,  
16 right?

17 So depending on an advertiser's goals, interests,  
18 what's behind their campaign, you know, and the vastly  
19 different costs and creative specifications across those  
20 channels, we talk about optimal channel mix. I mean, media  
21 mix modeling. Channel planning in advertising is a massive  
22 conversation.

23 Q Can advertisers use The Trade Desk to buy ads on social  
24 media platforms?

25 A No.

Direct Examination - John Dederick

1 Q Why not?

2 A At this point, the social media platforms -- the major  
3 social media platforms typically sell their ads directly.  
4 So the largest social media platforms have not started to  
5 participate in the RTB standards and the programmatic  
6 ecosystem -- the open programmatic ecosystem that The Trade  
7 Desk operates in. So we've focused and invested in the  
8 channels that have.

9 Q When you're advising advertisers on their digital ad  
10 campaigns, do you distinguish between social media ads and  
11 open web display ads?

12 A Certainly.

13 Q What are some of the distinguishing features between  
14 them?

15 A Social media ads are different creative specifications.  
16 Again, the context of a social media ad is extremely  
17 different. They're appearing in user-generated content.  
18 You need to anticipate the mindset of a consumer in social  
19 media.

20 Open web display advertising is really not  
21 typically associated with that, nor are the creative specs  
22 the same. So, you know, I think -- I don't know any  
23 advertisers that would think of those as interchangeable, I  
24 don't think.

25 Q When you're advising advertisers, do you distinguish

Direct Examination - John Dederick

1 between in-app ads on one hand and open web display ads on  
2 the other?

3 A Yes.

4 Q What are some of the differences between them in your  
5 conversations with advertisers?

6 A Well, in-app advertising typically refers to,  
7 again, small -- smaller creative specifications for in-app  
8 ads. The experience for a consumer seeing an in-app ad is  
9 very different from an open web display ad, for example, on  
10 a desktop computer or a laptop.

11 So the price point is different. The targeting  
12 options are different. Yeah, so they're different.

13 Q Why do you say that in-app ads have smaller specs than  
14 open web display?

15 A Well, the most popular in-app ad format -- you know,  
16 just the pixel sizing is smaller than most of the most  
17 popular open web display ad formats.

18 Q Is that because --

19 A It's an app.

20 Q -- app ads typically are on a phone?

21 A Yes.

22 Q In your experience, do advertisers distinguish between  
23 in-stream video ads and open web display ads?

24 A Yes.

25 Q What are some of the differences between them?

Direct Examination - John Dederick

1 A In-stream video, again, it's just a different price  
2 point. It is a different format that you need to anticipate  
3 the mindset of a consumer seeing your ad. You need to  
4 anticipate the creative specifications and investment.

5 I mean, it's -- again, it's a completely different  
6 format than an open web display.

7 Q When you say video ads have different price points,  
8 what do you mean?

9 A Video ads are typically more expensive than open web  
10 display.

11 Q Mr. Dederick, are you familiar with a digital  
12 advertising company called Admeld?

13 A Yes.

14 Q Does Admeld still exist?

15 A No.

16 Q What was Admeld?

17 A Admeld was an early supply-side platform in  
18 programmatic.

19 Q And when you say "programmatic," what do you mean?

20 A They -- in the -- in some of the early years of the  
21 programmatic ecosystem, as in ad exchanges beginning to  
22 operate on real-time bidding standards and demand-side  
23 platforms doing the same, Admeld was one of the most popular  
24 supply-side platforms used by --

25 MS. DUNN: Your Honor, we object on foundation

Direct Examination - John Dederick

1 basis which has not been laid as to the --

2 THE COURT: I'll sustain the objection.

3 Lay your foundation.

4 MR. GUARNERA: Sure.

5 BY MR. GUARNERA

6 Q Mr. Dederick, were you at The Trade Desk at the time --  
7 I'll withdraw that.

8 Did The Trade Desk buy digital ads through Admeld  
9 prior -- well, did The Trade Desk buy digital ads through  
10 Admeld?

11 A Yes.

12 Q Were you at The Trade Desk around the time that Admeld  
13 was acquired?

14 A Yes.

15 Q Did The Trade Desk observe any effects following  
16 Google's acquisition of Admeld?

17 A Well, the -- what was previously a separate supply-side  
18 platform and a separate source of demand became part of a  
19 different -- so yes. I mean, yes.

20 Q So what used to be two separate supply-side platforms  
21 became one?

22 A Yes.

23 Q Can you expand on that.

24 A So the AdX Google supply-side platform -- you know, I  
25 think it's important here --

Direct Examination - John Dederick

1 MS. DUNN: Your Honor, I -- we're going to go  
2 ahead and object again on foundation basis because the dates  
3 are a little unclear here with respect to when he began at  
4 The Trade Desk and when the Admeld acquisition happened.  
5 And so if the dates could be ironed out correctly, it may be  
6 not an objection.

7 THE COURT: You need to be more specific about  
8 this. All right?

9 MR. GUARNERA: Sure, Your Honor.

10 BY MR. GUARNERA

11 Q Mr. Dederick, when did you start at The Trade Desk?

12 A 2012.

13 Q Are you aware of when Admeld was acquired by Google?

14 A I believe it was right around the same time period. I  
15 don't know the exact dates of the acquisition.

16 Q When you were at The Trade Desk early on in your tenure  
17 there, was the Admeld acquisition something that was  
18 significant to The Trade Desk?

19 A Yes. It was frequently discussed. And what I would  
20 say -- I mean, our work --

21 THE COURT: Wait. There's no question pending.

22 Did you yourself, while you were working at Trade  
23 Desk, do any direct work with Admeld?

24 THE WITNESS: No. I wouldn't have -- I mean, I  
25 have sat on the sales side predominantly. So I would have

Direct Examination - John Dederick

1 been talking to the other employees of The Trade Desk who  
2 interacted directly with Admeld.

3 THE COURT: But you yourself did not?

4 THE WITNESS: No.

5 BY MR. GUARNERA

6 Q But in advising your advertiser customers, was it  
7 important for your job to understand Admeld's role as a  
8 supply-side platform?

9 A Yes. It's what we do. We assess the supply side.

10 MS. DUNN: Same basis of the objection.

11 THE COURT: I'm going to sustain the objection.  
12 And you should be able to have another witness who can do  
13 that.

14 BY MR. GUARNERA

15 Q Mr. Dederick, are you familiar with the term "header  
16 bidding"?

17 A Yes.

18 Q And the Court has heard about header bidding a number  
19 of times; so I think we can skip some of the preliminaries.

20 Does The Trade Desk bid into header bidding  
21 auctions?

22 A Yes.

23 Q When header bidding was introduced, what was The Trade  
24 Desk's perspective on header bidding?

25 A We were extremely excited about header bidding. I



Direct Examination - John Dederick

1 mean, what it meant for The Trade Desk was the capacity to  
2 access significantly more ads that were previously sort of  
3 blocked from access by publisher waterfall and DFP.

4 And, you know, we were so excited, we actually had  
5 our -- when we went public in 2016, we asked the prospective  
6 investors to watch an explainer video about what header  
7 bidding was before they invested in the company.

8 We thought it was really critical to the growth of  
9 our company, that we had the potential to gain access to the  
10 ads that were previously -- you know, we didn't have access  
11 to because of the publisher waterfall in DFP.

12 And so when we saw header bidding arise, we saw  
13 increased competition among exchanges. We saw the potential  
14 for competition in publisher-side ad servers. And we felt  
15 that there was the opportunity to compete meaningfully in  
16 channels like open web display in a way that there hadn't  
17 been and there wouldn't be without it.

18 Q You mentioned a moment ago that The Trade Desk didn't  
19 have access to certain inventory before header bidding.

20 What did you mean by that?

21 A If you think of -- if you think of DFP, the publisher  
22 ad server, as the switchboard of ad selection on the supply  
23 side, the publisher waterfall will enable different sources  
24 of demand to either have access to publisher ad inventory or  
25 not.

Direct Examination - John Dederick

1           And so often the publisher waterfall would look  
2           like direct sold by the publisher sales team or  
3           sponsorships -- AdX, ad networks, the Trade Desk. And only  
4           if all of those other guys passed did The Trade Desk ever  
5           have a chance, even if we were willing to pay more. And so  
6           that's why.

7           Q     Mr. Dederick, I'd like to show you a document that's in  
8           your binder labeled PTX 1650.

9                     Mr. Dederick, does The Trade Desk regularly give  
10          employee trainings in the course of running its business?

11          A     Yes.

12          Q     Is it important to The Trade Desk's business that its  
13          employees have accurate information about digital  
14          advertising technology?

15          A     Yes.

16                    THE COURT: All right. Ms. Dunn, is there any  
17          objection to 1650?

18                    MS. DUNN: No objection, Your Honor.

19                    THE COURT: All right. It's in evidence.

20                    MR. GUARNERA: Thank you, Your Honor.

21                    Plaintiffs move 1650 into evidence.

22                    THE COURT: Yes. It's in.

23          BY MR. GUARNERA

24          Q     Mr. Dederick, what is Palooza '17?

25          A     Palooza is an event where The Trade Desk brings all of

Direct Examination - John Dederick

1 its employees together for the purposes of education and  
2 morale-building.

3 So this would have been a presentation given to  
4 the whole company in 2017, it looks like by Akhil Savani,  
5 who's the head of our supply-side -- one of the heads of our  
6 supply-side partnerships at this time.

7 Q Would Akhil Savani be a subject matter expert in header  
8 bidding at The Trade Desk at this time?

9 A Yes.

10 Q And who from The Trade Desk would have been in  
11 attendance at Palooza '17?

12 A All employees at the company were invited.

13 Q When did header bidding become popular?

14 A Header bidding became popular in -- I believe 2016 and  
15 '17 were really the years where it was popularized and  
16 made -- you know, innovations by other ad exchanges began to  
17 create a lot more competition in header bidding.

18 Q Mr. Dederick, I'd like to direct your attention to  
19 page 6. And we'll put it on the screen as well if that's  
20 easier. It ends in Bates Number 3044.

21 Do you see the title of the slide is "Google's  
22 Position Before Header Bidding"?

23 A Yes.

24 Q And then there's a top box that says, "Google's ad  
25 server is used by almost all publishers, 77 percent of

Direct Examination - John Dederick

1 market share in 2015."

2 A Yes.

3 Q And the middle box says, "Google's SSP was tightly  
4 integrated with its ad server, allowing preferential access  
5 to ad inventory before other SSPs."

6 A Yes.

7 Q What do you understand that middle box to be referring  
8 to?

9 A Well, that's that waterfall, the idea that, if you  
10 control the ad server, you control when different sources of  
11 demand will see an ad opportunity. And so it's -- the DFP  
12 ad server in this case would be giving AdX access to an  
13 impression before other SSPs.

14 Q And the final box on that slide says, "As a result,  
15 Google had a significant competitive advantage in the  
16 programmatic ad market."

17 Do you agree with that statement?

18 A Yes.

19 Q Mr. Dederick, I notice there's a diagram that says  
20 "Googlopoly" on the slide.

21 What do you understand that to mean?

22 A You know, it's a reference to the dominant position  
23 that Google had in these areas of the supply side of our  
24 industry.

25 MS. DUNN: Objection, Your Honor. I think we

Direct Examination - John Dederick

1 crossed the line there.

2 THE COURT: It's too close to the line, yes.

3 BY MR. GUARNERA

4 Q Mr. Dederick, could you turn to page 7, which is Bates  
5 Number 3045. And the title of this slide is "Header Bidding  
6 Levels the Playing Field."

7 Do you see that?

8 A Yep.

9 Q Can you describe what this diagram conveys.

10 A Yeah. This is the DFP waterfall just laid out, you  
11 know, more in a different format, where you're seeing the  
12 direct sales slot within the waterfall would be first, all  
13 the way on the left. So, again, that's the publisher  
14 selling ads directly. The Google ad exchange, AdX, would  
15 have the next ability to bid. And so what header bidding  
16 did was put all of these -- instead of in a waterfall, put  
17 them next to each other.

18 So previously, before header bidding, SSP 1 would  
19 have never had the opportunity to see the impression. With  
20 header bidding, where specifically all of these ads were  
21 submitted within the header wrapper before the ad server is  
22 called on a website, all of these different SSPs would be --  
23 and in-demand sources would be called at the same time.

24 So if SSP 3 bid the highest -- which, in this  
25 case, they did, \$4 -- they would actually have the

Direct Examination - John Dederick

1 opportunity to pay more. And whatever buyer behind that  
2 would have the opportunity to buy the impression if it was  
3 the most valuable for them. And whatever publisher sat  
4 behind it would have the opportunity to have the best CPM  
5 price and the highest CPM price.

6 Q So using Slide 7 here, what was the advantage of header  
7 bidding to advertisers?

8 A Access to all impressions in -- at the same time in a  
9 more liquid market with significantly more price discovery.

10 Q Mr. Dederick, please turn the presentation to Slide 14,  
11 which ends in 3025. The title of this slide is "How Header  
12 Bidding impacts Advertisers."

13 Do you see that?

14 A Yep.

15 Q There a green upward arrow and three bullets that say,  
16 first of all, "access higher quality programmatic  
17 inventory."

18 Is that along the lines of what you were just  
19 describing?

20 A Yes. I mean, often in the early days of programmatic,  
21 the demand sources were below direct sales. Right? So the  
22 high-quality inventory would have been associated with  
23 direct sales teams from publishers. And regardless of  
24 whether or not a programmatic demand source, like a DSP,  
25 would be willing to pay more, it would never have the

Direct Examination - John Dederick

1 opportunity to do it.

2           What this meant was the demand-side platforms now  
3 saw those ad impressions, and they had the opportunity to  
4 say I'm willing to pay more than your insertion order or  
5 your direct sales tactic. So as a result of this, we had  
6 access to a tremendous amount of unique supply that we  
7 didn't before header bidding.

8 Q     And the second bullet, Mr. Dederick, says, "Better  
9 forecasts of available inventory."

10           Can you explain what that means.

11 A     Sure.

12           Forecasting is one of the hardest and most  
13 important jobs for a demand-side platform. And the more  
14 data that we see of available impressions, again, we can  
15 really say how much ad inventory is there on a given  
16 publisher. We're not just locked into one position that  
17 we're occasionally called on from a publisher ad server.

18 Q     And, finally, Mr. Dederick, the last bullet says,  
19 "Campaigns can have greater scale."

20           What does that mean?

21 A     It means that you have access to significantly more  
22 inventory through programmatic channels for all of these  
23 reasons. Previously, many impressions were never made  
24 available to competing exchanges or demand-side platforms  
25 like The Trade Desk because they were below the top

Direct Examination - John Dederick

1 positions of the waterfall.

2 Q And I see, Mr. Dederick, there's red downward arrow  
3 that has one bullet, "Higher CPMs."

4 What does higher CPMs mean?

5 A It means we anticipated and we saw more quality  
6 inventory come in, which our buyers were -- you know, in  
7 some cases, they were willing to pay, but they wanted to  
8 know it was worth it.

9 So, naturally, paying more for a buyer isn't the  
10 most palatable thing; but if the ads were quality, the  
11 buyers were there.

12 Q Were there any other challenges that header bidding  
13 raised for advertisers?

14 A I mean, not for advertisers. For us on the demand-side  
15 business, we saw significantly more volume of supply which  
16 was more expensive to process. And, again, like, we didn't  
17 grow demand necessarily in a way that was correlated. So it  
18 was much more expensive for us to evaluate so much more  
19 supply, sometimes being duplicative supply.

20 But, again, I mean, we went public, and we forced  
21 investors to watch this video because we thought it was  
22 critical to the future of our company that this was  
23 happening. So we were more than willing to deal with some  
24 of that added expense for the opportunity.

25 Q And I'm sorry, Mr. Dederick. What video are you



Direct Examination - John Dederick

1 describing?

2 A We produced an educational video for investors on our  
3 IPO roadshow that was focused on the impact of header  
4 bidding on the advertising industry.

5 Q And why did The Trade Desk consider header bidding to  
6 be so important for its future?

7 A Well, previously, so much of the ad supply, the  
8 advertising supply, especially in open web display, just  
9 wasn't available to us to bid on because of our position in  
10 DFP, DFP being the ad server used by most publishers. If  
11 DFP never chose to show us an ad, we never had an  
12 opportunity to buy it.

13 Suddenly, because of competition across exchanges,  
14 we had an opportunity to buy the ads that we had never seen  
15 before. So it meant, for the first time, there was a chance  
16 that The Trade Desk would be able to look at everything and  
17 help a buyer really make the right decision across  
18 everything.

19 Q Do you consider the risk of bid duplication to be a  
20 reason not to use header bidding?

21 A No. That's what I referred to earlier with, you know,  
22 increased costs for a demand-side platform. Bid duplication  
23 really means that a publisher might choose to have multiple  
24 SSPs implemented on its page. So we might see the same ad  
25 impression from multiple exchanges. That's just added cost

Direct Examination - John Dederick

1 for us. So that was one of the impacts of this. But,  
2 again, very worth it for the access to the supply.

3 Q Given your experience at The Trade Desk, do you view  
4 the risk of ad fraud with header bidding to be a reason  
5 advertisers shouldn't use header bidding?

6 A Absolutely not.

7 Q Why not?

8 A We didn't see any correlation between header bidding --  
9 I mean, as it says on this page, we were getting access to  
10 higher-quality programmatic inventory than we ever had.

11 Q Was the risk of malware a reason not to use header  
12 bidding?

13 A No. And same reason.

14 Q What is latency as that term is used in digital  
15 advertising?

16 A Latency refers to a delay, some form of delay.

17 MS. DUNN: Your Honor, I'm just going to object on  
18 the basis of whether these questions are about what the  
19 advertisers were thinking or what The Trade Desk was  
20 thinking. It's a little unclear.

21 And I think if it's just what his view is or The  
22 Trade Desk view, that would not be objectionable.

23 THE COURT: All right. I had assumed that was how  
24 the answer was coming in. This is a concern for The Trade  
25 Desk. That's what he can testify to.

Direct Examination - John Dederick

1 MR. GUARNERA: Your Honor, I think given the  
2 foundation that Mr. Dederick described about his daily work  
3 with --

4 THE COURT: We've already had latency discussed  
5 anyway. Is he going to say something else about latency?

6 MR. GUARNERA: Only from the perspective of a DSP,  
7 Your Honor, because he's the first DSP that's testified.  
8 And so with just one question about whether latency affects  
9 DSPs' ability to use header bidding, I think that would be  
10 sufficient.

11 THE COURT: That one question is all right.

12 BY MR. GUARNERA

13 Q Mr. Dederick, as a DSP, does The Trade Desk view  
14 latency as a reason not to use header bidding?

15 A No.

16 Q Mr. Dederick, did you observe any changes in Google's  
17 policies after header bidding became popular?

18 A Yes.

19 Q What were -- what was -- was or were those changes?

20 A We started to see the -- an alternative sort of to  
21 emerge in what was their open bidding product, where,  
22 instead of having competitive exchanges independently in the  
23 header of a website, they would be routed through Google's  
24 technology.

25 And, effectively, we began to -- at first we were

Direct Examination - John Dederick

1 very confused, honestly, because what we saw was that  
2 impressions were coming through open bidding and open -- I  
3 don't know how much you've all already talked about what  
4 this is. But open bidding is AdX, the Google SSP, giving  
5 access to these other exchanges to impressions.

6 And we started seeing that impressions were coming  
7 through open bidding. And it appeared that they were coming  
8 through at costs that were lower than we were willing to pay  
9 through AdX directly. And it just made no sense, honestly,  
10 because we are -- we were then and we're now a pretty big  
11 source of demand. So it would be the equivalent of, like,  
12 Coca-Cola selling their product to the corner bodega for 70  
13 cents and to Walmart for a dollar. It didn't make any sense  
14 that this was happening.

15 MS. DUNN: Objection also on foundation.

16 THE COURT: Well, no, he's saying what his company  
17 experienced. That certainly is personal firsthand  
18 information.

19 Overruled.

20 BY MR. GUARNERA

21 Q You can finish your answer, Mr. Dederick.

22 A Okay.

23 But, yeah, just from the interest as a buyer, it  
24 didn't make sense why if -- again, if we're willing to pay  
25 more, why are these ads going through multiple hops? Why

Direct Examination - John Dederick

1 are we seeing two exchanges in a given bid request when we  
2 would -- we think it would be a more efficient supply chain  
3 to buy it from one.

4 So, you know, we didn't understand. You know, it  
5 didn't and wouldn't make sense to us unless there was  
6 something else happening.

7 Q As a demand-side platform that facilitates digital ad  
8 buying, do you see any benefits to open bidding?

9 A No.

10 Q Are there costs associated with open bidding?

11 A Well, there's a cost of 5 percent, but that's nothing  
12 compared to the cost of adding control over what was  
13 previously -- what was previously broken out of complete  
14 visibility and advantage from the Google publisher ad  
15 server. I mean, that's really the cost.

16 So, yes, they added 5 percent to the supply chain.  
17 But, more importantly, they took back the disruption that  
18 created price discovery and access for advertisers by having  
19 the header bidding implementation.

20 And so, yes, we -- and eventually The Trade Desk  
21 decided to shut off the open bidding pipe because we didn't  
22 see value for our advertisers in continuing to buy it.

23 Q In your experience working with advertisers buying  
24 digital ad inventory, what effect has open bidding had on  
25 header bidding?

Direct Examination - John Dederick

1 A Well, there was a time, you know, you'd go to industry  
2 events and they're like -- the publisher sales teams from  
3 competing exchanges would be there in full effect. And  
4 there was often conversations about competing publisher ad  
5 servers in our industry and articles being written --

6 MS. DUNN: Your Honor.

7 THE COURT: Wait, wait, wait.

8 MR. GUARNERA: Your Honor, he's not -- he's  
9 repeating -- he's describing the number and presence of  
10 sales representatives at conferences. He's not repeating  
11 out-of-court statements.

12 MS. DUNN: Same objection, Your Honor.

13 THE COURT: Well, if he's not repeating a  
14 statement, if he was there and he saw how many people were  
15 present, that's firsthand.

16 MS. DUNN: I think he can testify to the number of  
17 people. I think when he says there were conversations about  
18 that --

19 THE COURT: I agree. At that point, that's  
20 hearsay.

21 MR. GUARNERA: I think he had already stepped back  
22 from that, yes.

23 THE WITNESS: I read a lot of articles about  
24 this --

25 THE COURT: That would be the same problem.

Direct Examination - John Dederick

1 THE WITNESS: Okay.

2 BY MR. GUARNERA

3 Q Mr. Dederick, just based on your firsthand experience  
4 working at The Trade Desk, what effect have you observed  
5 open bidding to have on header bidding?

6 A It's decimated header bidding.

7 Q Why do you say that?

8 A There's no competition -- it -- pre-ad server anymore.  
9 The idea that the industry had a way to submit bids prior to  
10 having complete oversight from Google is no longer there.

11 Q Mr. Dederick, are you familiar with a policy known as  
12 last look?

13 A Yes.

14 Q What is last look?

15 A Last look refers to the idea that -- it would be like  
16 if -- it's another -- this is -- we're talking about  
17 auctions. We're talking about auction mechanics.

18 Last look would be the equivalent of a silent  
19 auction where everybody puts in their bid, no one is allowed  
20 to see it, except the last person gets to look at everybody  
21 else's bid and then decide what to bid. That's what last  
22 look advantage is in the advertising auction marketplace.

23 Q Has last look had any effect on the advertisers that  
24 use The Trade Desk to buy digital ads?

25 A Yes.

Cross-Examination - J. Dederick

1 Q What effect is that?

2 A If Google has the opportunity to buy an ad for whatever  
3 purpose when The Trade Desk advertiser is willing to pay  
4 more for that ad to buy it and let's say Google sells it to  
5 their ad network for -- an advertiser comes in saying I'm  
6 willing to pay \$5 for this, Google would rather sell it  
7 through their ad network, that same impression, for 75 -- or  
8 to their ad network for 75 cents but then mark it up to \$5.

9 In our example, the publisher and the advertiser  
10 had a clear exchange, and the other -- both parties lost out  
11 and didn't have the opportunity to benefit from a clean,  
12 transparent supply chain and, I think, most importantly, a  
13 fair auction.

14 MR. GUARNERA: Thank you, Mr. Dederick. No more  
15 questions.

16 THE COURT: All right.

17 Ms. Dunn?

18 MS. DUNN: Thank you, Your Honor. We'd like the  
19 hand out the binders, if that's okay.

20 THE COURT: Yes, ma'am.

21 MS. DUNN: Thank you.

22 May I proceed?

23 THE COURT: Yes, ma'am.

24 MS. DUNN: Thank you.

25 CROSS-EXAMINATION



Cross-Examination - J. Dederick

1 BY MS. DUNN:

2 Q Good afternoon, Mr. Dederick. My name is Karen Dunn.  
3 I'm going to be asking you some questions. We've not met;  
4 so I wanted to introduce myself.

5 A Nice to meet you.

6 Q Good to meet you.

7 I'm going to ask Mr. Spalding to put up  
8 Plaintiffs' Demonstrative A that they used in their exam.  
9 You should be able to see it on the screen.

10 So the first thing I want to ask about this is you  
11 see the red rectangles?

12 A Uh-huh.

13 Q Okay. So you had testified that the only place here  
14 that The Trade Desk belongs in the box called demand-side  
15 platform.

16 Do you remember that?

17 A Yes.

18 Q And you'll notice that this doesn't have a red  
19 rectangle around it, right?

20 A The demand-side platform box?

21 Q Correct.

22 A Yes.

23 Q Right. And I'll just represent to you that's because  
24 plaintiffs are arguing that The Trade Desk is not in the  
25 market in this case.

Cross-Examination - J. Dederick

1 Are you aware of that?

2 A I didn't understand. I'm sorry. Will you repeat that  
3 question.

4 Q So the plaintiffs have not circled "demand-side  
5 platforms" with a red rectangle because they don't believe  
6 that The Trade Desk is even in the market that they're  
7 talking about.

8 Are you aware of that?

9 MR. GUARNERA: Your Honor, we object for  
10 relevance. Mr. Dederick's understanding of what is or is  
11 not in the market in this case doesn't affect his testimony.

12 THE WITNESS: I haven't read this --

13 THE COURT: Wait just a second.

14 I'm going to sustain the objection.

15 BY MS. DUNN:

16 Q Okay. So to be clear, when The Trade Desk bids into  
17 AdX auctions -- well, first of all, let's establish that.

18 You testified that The Trade Desk, which is in  
19 that box, demand-side platform, bids into AdX, which is  
20 marked ad exchange here, right?

21 A Yes.

22 Q Okay. And when The Trade Desk bids into AdX, it  
23 competes with Google Ads, correct?

24 A When The Trade Desk -- I'm sorry. Will you repeat  
25 that.

Cross-Examination - J. Dederick

1 Q It competes with Google Ads, correct?

2 A When we bid into AdX?

3 Q Correct.

4 A I wouldn't characterize that as competing with --

5 Q Well, let me put it to you this way: You're bidding  
6 into AdX. Is Google Ads also bidding into AdX?

7 A From our understanding, GDN, their ad network, does bid  
8 into AdX.

9 Q Right. And you testified that GDN and Google Ads are  
10 the same just a second ago, right?

11 A Yes. So their ad network is going to bid into their ad  
12 exchange.

13 Q Right. So you're bidding into AdX. And GDN, or Google  
14 Ads, is also bidding into AdX, you just testified, right?

15 A Yes.

16 Q And Google's DV360 is also bidding into AdX, correct?

17 A Yes.

18 Q And other authorized buyers are also bidding into AdX,  
19 right?

20 A Yes.

21 Q And there are a good number of authorized buyers that  
22 are also bidding into AdX, correct?

23 A Yes.

24 Q And they're competing with you, right?

25 A In the context of the auction?

Cross-Examination - J. Dederick

1 Q Yeah.

2 A We have the opportunity often to bid on the same ads,  
3 but that would be subject to the placement in the publisher  
4 ad server. I mean, that's the obvious caveat.

5 Q Understood. But everybody is bidding into the same  
6 auction, right?

7 A Yes. Whether the bids are seen or not is the question.

8 Q I understand. I want to just be clear. Everybody we  
9 just talked about is bidding into the same auction in AdX?

10 A Bidding into the same ad exchange.

11 Q Yes.

12 A (Nods head up and down.)

13 Q We agree?

14 A Yes.

15 Q And when The Trade Desk bids into AdX, it's bidding on  
16 ads that appear on websites, right?

17 A Yes. Among other formats, yes.

18 Q Right. It's bidding on ads that appear on apps, right?

19 A At times, yes.

20 Q Right. And it's bidding on ads that appear on  
21 connected TV, right?

22 A I'm not familiar with AdX's position in connected  
23 television; so I'm not qualified to answer that part.

24 Q Okay. So you don't even know AdX -- how AdX functions  
25 with regard to connected TV?

Cross-Examination - J. Dederick

1 A I don't think AdX has a very meaningful presence in  
2 connected television, but I believe they're building their  
3 presence in connected television. So I believe that we do.

4 Q Okay. But that's not something you know much about?

5 A I -- if AdX doesn't have a meaningful presence in  
6 connected television, there's a lot of things about the  
7 supply landscape I need to know a lot about. So, yeah,  
8 that's not something I've spent much time with.

9 Q Your specialty is not the supply landscape?

10 A My specialty is helping buyers assess the supply  
11 landscape. So that's essentially all we do, is we look at  
12 the supply landscape and we help buyers decide, based on  
13 what's available, what the best thing is to buy for them.  
14 So I would say, yeah, I have a lot of experience assessing  
15 the supply landscape.

16 Q Okay. But we agree that, with respect to AdX and  
17 connected TV, that is not something you know very much  
18 about?

19 A That's not what I said. I haven't spent a lot of time  
20 with that.

21 Q Okay. And when The Trade Desk bids into AdX, it also  
22 bids on static display ads, right?

23 A Yes.

24 Q And out-stream video ads, right?

25 A Yes.

Cross-Examination - J. Dederick

1 Q And in-stream video ads, right?

2 A Yes.

3 Q And native ads, right?

4 A Yes.

5 Q Okay. And so you're just focused on the tool. The  
6 demand-side platform, or AdX, there is an interaction with  
7 respect to each of those tools in all of those categories of  
8 ads that we just discussed, right?

9 A There's -- what do you mean by "interaction"?

10 Q Yeah, I agree. It's a bad question.

11 So when the demand-side platform is bidding into  
12 AdX, you and I just talked about seven ad formats. And you  
13 agreed with me that the demand-side platform is bidding  
14 into -- Trade Desk is bidding into ad exchange with respect  
15 to all of those ad formats, right?

16 A Yes. Most exchanges try to represent multiple  
17 channels, as The Trade Desk does.

18 Q Right. So if you are only focused on the tool itself,  
19 you are only focused on, let's say, the ad exchange, you  
20 would say that that ad exchange was -- had functions with  
21 respect to all of those ad formats, right?

22 A As in the -- okay. I think I don't understand what you  
23 mean by "functions."

24 Q Would it help if I said "functionality"? Right? The  
25 ad exchange has to have functionality with respect to all

Cross-Examination - J. Dederick

1 those seven types of ads that we just discussed in order to  
2 receive the bids from The Trade Desk?

3 A Yeah. I mean, there's significant context to how much  
4 market presence it would have, but yes, functionality.

5 Q Right. And the demand-side platform we just discussed  
6 also has functionality. So The Trade Desk has functionality  
7 with respect to those seven kinds of ads that we just  
8 discussed, correct?

9 A Yes.

10 Q And is there a tool that you see on the slide in front  
11 of you that does not have functionality for multiple ad  
12 formats?

13 A These are really broad buckets. So, you know, there  
14 will be advertiser ad networks that are explicitly open web  
15 display or video. So it really would depend on the  
16 individual company, is the reality.

17 Q Right. So you can't just look at the tool and know, is  
18 what you're saying?

19 A That's correct.

20 Q Okay. And you just said these are very broad buckets.  
21 Is that another way of saying -- I'm just trying to  
22 understand.

23 Is that another way of saying that there are other  
24 things in the ecosystem that don't appear on this slide?

25 A What I -- what I was intending to say is that there's a

Cross-Examination - J. Dederick

1 lot of advertisers in the world, for example.

2 Q Right. Right. But I think the advertisers in the  
3 world could really fit in the bucket advertisers, right?

4 A Yes.

5 Q My question is more about the tools in the middle.

6 So does the ecosystem, you know, that's comprised  
7 of the sell side and the buy side, does that include more  
8 tools than you can see on this slide?

9 A These are most of the major tools. There's a few major  
10 tools missing, but these are most of the major tools.

11 Q Okay.

12 THE COURT: Just so I'm not confused, though,  
13 could there not be another arrow that goes from both the  
14 advertiser ad network or the demand-side platform, put it  
15 underneath the ad exchange, and go right to the publisher ad  
16 server?

17 THE WITNESS: Could -- oh, so you're saying could  
18 the demand-side platform go --

19 THE COURT: You can bypass the exchange?

20 THE WITNESS: Yes. So that would be open path,  
21 what you've described.

22 THE COURT: And you could also even bypass, I  
23 guess, the server and go right to the publisher.

24 THE WITNESS: You can't.

25 THE COURT: Why can't you?



Cross-Examination - J. Dederick

1 THE WITNESS: You can do that if the publisher --  
2 there are no other publisher ad servers available -- or  
3 there are no competitive publisher ad servers available. So  
4 some publishers, the largest in the world in connected  
5 television, are building their own ad servers.

6 THE COURT: Well, there's the old-fashioned way.  
7 You could hire a person. A human being could go over, knock  
8 on the door, talk to them.

9 THE WITNESS: When a publisher thinks about  
10 integrating an ad server, when they integrate Google's ad  
11 server, they gain the benefit of millions of advertisers  
12 obtained by Google search.

13 THE COURT: All right. So you're saying once  
14 somebody has the server, they're not going to any longer do  
15 what I call the old-fashioned approach?

16 THE WITNESS: Well, if you use the old-fashioned  
17 approach, you don't get access to the greatest source of  
18 demand in the history of advertising, which is Google search  
19 advertisers.

20 THE COURT: Okay.

21 THE WITNESS: That's what DFP comes with, out of  
22 the box, millions of advertisers excited to buy your ads,  
23 free checks in the mail.

24 THE COURT: All right. Go ahead.

25 BY MS. DUNN:

Cross-Examination - J. Dederick

1 Q Also, I just want to make clear. I don't know if  
2 you're aware of this, that search is not part of the case.  
3 Do you know that?

4 MR. GUARNERA: Objection, Your Honor. Again, it  
5 is not relevant whether it's part of case.

6 THE COURT: Well, we've had search discussed. It  
7 needs to be there. Overruled.

8 THE WITNESS: This ecosystem would not exist  
9 without the dominant position in search where -- again, I  
10 mentioned what we're talking about, Google built the most  
11 incredible search --

12 BY MS. DUNN

13 Q Sir, I'd ask you just to answer the question that I  
14 asked. Your counsel will have time to follow up with you if  
15 he would like.

16 So my question is are you aware that search is not  
17 part of this case?

18 A I think of this case as highly related to search,  
19 but -- or I think of this conversation as highly related.  
20 So no, I wasn't aware.

21 Q Okay. Thank you.

22 Okay. So we just talked about -- and I think,  
23 actually, I heard you talk to your counsel about a lot of  
24 tools. You were mentioning, like, many, many tools.

25 MR. GUARNERA: Objection, Your Honor. I'm not

Cross-Examination - J. Dederick

1 Mr. Dederick's counsel.

2 MS. DUNN: Oh, I'm so sorry. That's very fair.

3 BY MS. DUNN

4 Q You were talking to plaintiffs' counsel, and you  
5 mentioned numerous tools.

6 Do you remember that?

7 A I don't. Remind me. What were we talking about?

8 Q He was asking about malware, other things like that.  
9 And you started talking about additional tools.

10 A I do remember that conversation.

11 Q Okay. Are those tools on this slide?

12 A To the extent they're integrated in demand-side  
13 platforms or publisher ad exchanges, yes. I mean,  
14 there's -- these -- so, for example, within a demand-side  
15 platform, we will have a marketplace of tools. Those tools  
16 include data for buying -- for targeting measurement tools.  
17 These are verification tools. So for the most part, those  
18 tools fit into the demand-side platform or the ad exchange  
19 buckets on this slide.

20 Q Okay. So those tools you just talked about could be  
21 either, you said, in the demand-side platform box or the ad  
22 exchange box. Is that what you said?

23 A Us. Some of those third parties sell themselves  
24 directly to ad exchanges. For the most part, they're going  
25 to exist in the demand-side platform box.

Cross-Examination - J. Dederick

1 Q So there's some functionality that you've testified  
2 about could be in the demand-side box or one of the other  
3 boxes. That's what we just talked about, right?

4 A Yes. To the extent that a verification company goes to  
5 an ad exchange and says, "Hey, we will help you clean your  
6 inventory using our verification technology and charge you a  
7 fee," that limited use case would be what I'm talking about.

8 Q I just want to see if you agree with this statement:  
9 This is a very complex industry, and this is a very simple  
10 slide. Agree or disagree?

11 A I think our industry uses complexity as a shield.

12 MR. GUARNERA: Your Honor.

13 THE COURT: I'm sorry.

14 What's the objection?

15 MR. GUARNERA: The question is vague and --

16 THE COURT: No. I have it's a very  
17 straightforward question. It is a yes or a no answer.

18 BY MS. DUNN

19 Q Yes or no, sir?

20 A No.

21 Q Okay. All right. You also mentioned in your testimony  
22 that ad networks are on the sell side.

23 Do you remember that?

24 A Uh-huh.

25 Q Do you see that here, advertiser ad networks on the

Cross-Examination - J. Dederick

1 sell side?

2 A I see advertiser ad network being represented on the  
3 buy side in this slide.

4 Q I do too. My understanding of a network is that -- in  
5 case it's helpful, is that it is on the buy side and the  
6 sell side because it's a network.

7 Is that your understanding?

8 A When we think about ad networks -- when I talk to  
9 buyers about ad networks, you're usually talking about a  
10 company that you can go to that would sell you ads. A  
11 demand-side platform, I think of as a company you go to to  
12 help you buy ads.

13 I know this may sound like semantics. But that's  
14 why, from The Trade Desk lens, from the lens of our  
15 customers, we think of an ad network as something that  
16 exists on the supply side.

17 Q Okay. So this -- so from your perspective, putting the  
18 advertiser ad network on the buy side is not accurate given  
19 that you just testified it's on the sell side, right?

20 A From my lens -- again, I represent a buying platform,  
21 and I talk to advertisers and marketers all day -- they  
22 think of ad networks typically as more akin to working with  
23 a publisher than they do a demand-side platform. And so  
24 that's really just my lens.

25 Q I understand. One last thing on this, and then I'll

Cross-Examination - J. Dederick

1 move on. You testified a moment ago that The Trade Desk  
2 operates on the buy side, right?

3 A Yes.

4 Q Okay. The buy side of what?

5 A Of the advertising industry.

6 Q Of -- excuse me?

7 A The advertising ecosystem.

8 Q Okay. So this -- as you would call this, the  
9 advertising ecosystem, and you're on the buy side?

10 A Again, we just had an interesting conversation on ad  
11 networks, but yes. I mean, a demand-side platform is -- I  
12 can't imagine anyone arguing that a demand-side platform is  
13 not on the buy side of our industry.

14 Q Right. No disagreement there. I'm trying to  
15 understand the buy side of what? Because there are two  
16 sides here. There's a buy side and a sell side. I'm trying  
17 to figure out what they are the sides of.

18 A An advertising industry. There are sellers of  
19 advertising and buyers of advertising. It's pretty clear.

20 Q And this is an industry to match them together?

21 A I mean, in that we're transacting advertising, we have  
22 ad buyers and ad -- I don't understand your question or  
23 where it comes from.

24 Q You don't need to know where it comes from; you just --

25 THE COURT: Let's move this along.

Cross-Examination - J. Dederick

1 MS. DUNN: I'll move on.

2 So let's show Mr. Dederick The Sellers and  
3 Publishers Report from May 2024.

4 BY MS. DUNN

5 Q It should be in the black binder in front of you.

6 THE COURT: Do you have an exhibit number for this  
7 or no?

8 MS. DUNN: It is towards the back. It's not  
9 marked as an exhibit because it is very recent.

10 THE COURT: All right. So what date in '24?

11 MS. DUNN: It is May 2024, 0500.

12 THE COURT: Way at the back.

13 MS. DUNN: Thank you, sir.

14 THE WITNESS: I don't know. Is it -- can you pull  
15 it up.

16 MS. DUNN: We will pull it up. It should be in  
17 the black binder.

18 BY MS. DUNN

19 Q Do you have the black binder?

20 A Yeah. It's pretty big.

21 Q Yeah, it is. Towards the back. And we'll also show  
22 you on the screen.

23 Okay. You've got it there?

24 A Okay. I got it.

25 Q All right. Thank you, sir.

Cross-Examination - J. Dederick

1                   So The Trade Desk puts out a biannual report to  
2 clients, partners, and investors.

3                   You recognize this?

4     A     I do recognize this report.

5     Q     Right. This is the biannual report from May 2024, just  
6 earlier this year, correct?

7     A     Yes.

8     Q     Okay. So please direct your attention to page 2. This  
9 is a letter from your CEO, Jeff Green, to the clients,  
10 partners, and investors.

11                  Do you see that?

12     A     Yes.

13     Q     Do you see the sentence that begins "the open internet  
14 is at a tipping point"? Do you see that?

15     A     Yes.

16     Q     Okay. The second sentence there states, "In 2022  
17 Facebook and Google accounted for less than half of all  
18 digital advertising spending for the first time in a decade,  
19 a trend that accelerated in 2023."

20                  Do you see that?

21     A     I see those words, yes.

22     Q     Okay. The next sentence says that "Consumers now spend  
23 the majority of their time outside these big-tech walled  
24 gardens, increasingly preferring the best of the open  
25 internet."



Cross-Examination - J. Dederick

1           So is it fair to read this that, when it says  
2     "these big-tech walled gardens," your CEO is referring to  
3     Google and Facebook?

4     A     Yes.

5     Q     Okay. Then if you read a little bit along -- well,  
6     actually, is it also fair to infer from that sentence, when  
7     it says that "Consumers increasingly prefer the best of the  
8     open internet," that your CEO is not including Google as  
9     part of the open internet?

10           MR. GUARNERA: Your Honor, we have to object  
11     because this document, firstly, is not an exhibit. It was  
12     not on the exhibit list, and it's being read into evidence  
13     as if -- it's an out-of-court statement being read into  
14     evidence for the truth of the matter.

15           THE COURT: Do you want to move it in?

16           MS. DUNN: I would love to move it in. We  
17     actually know -- 2526 would be the next number, Your Honor.

18           MR. GUARNERA: Your Honor, the exhibit list was  
19     due in May 2024 -- after May 2024. It's simply too late to  
20     admit as an exhibit.

21           MS. DUNN: Your Honor, this witness was the  
22     30(b)(6) on behalf of the company. This is a very recent  
23     document that came right at the end of the period before the  
24     exhibit list was due. This is -- this report is also  
25     referred to in earning statements by the company.

Cross-Examination - J. Dederick

1 I'm happy to examine the witness on it, but we do  
2 think it is proper evidence for the Court. If the Court  
3 does not wish for us to admit it, we would like to still  
4 question the witness because it's cross-examination.

5 MR. VERNON: Your Honor, this would have been due  
6 in July 2024.

7 THE COURT: Remind me. Was the agreement that  
8 exhibits to be used during cross-examination were to have  
9 been revealed ahead of time?

10 MS. DUNN: No.

11 THE COURT: This is being used during cross.

12 MR. GUARNERA: It's also an out-of-court hearsay  
13 statement, Your Honor, that's being read for the truth.  
14 Mr. Green is not here.

15 THE COURT: But this is the 30(b)(6)  
16 representative of the corporation.

17 MS. DUNN: And --

18 THE COURT: Wait.

19 MS. DUNN: And the witness just testified on  
20 behalf of the company, "We were very excited. We this. We  
21 that."

22 MR. GUARNERA: Your Honor, he's testifying here in  
23 his personal capacity. Obviously, he's not a 30(b)(6)  
24 representative.

25 THE COURT: No. All right. He can testify about

Cross-Examination - J. Dederick

1 his reaction. But I'm going to sustain the objection. The  
2 exhibit will not come in. All right.

3 MS. DUNN: Understood, Your Honor.

4 BY MS. DUNN

5 Q Okay. Mr. Dederick, still in the same paragraph  
6 highlighted for you, when you read the sentence about  
7 consumers preferring to spend the majority of their time on  
8 the open internet and not these big-tech walled gardens, do  
9 you understand these big-tech walled gardens to refer to  
10 Google and Facebook?

11 THE WITNESS: I'm sorry, Judge. I need further  
12 direction. I didn't understand at what -- would you give me  
13 direction about how I should be testifying to this?

14 THE COURT: Were you present at this -- have you  
15 read this document?

16 THE WITNESS: Yes.

17 THE COURT: All right. Does it reflect your view  
18 of the ad tech industry in May of 2024?

19 THE WITNESS: This is -- this came from the  
20 company, not me personally. So no, I didn't write it, and I  
21 didn't contribute to writing it.

22 THE COURT: All right. Then he can't answer it.  
23 Let's move this along.

24 MS. DUNN: Okay. Your Honor, am I permitted to  
25 continue to examine him on the document on certain parts of

Cross-Examination - J. Dederick

1 it?

2 THE COURT: No.

3 MS. DUNN: This is a statement to investors and  
4 clients and all the partners from the company.

5 MR. GUARNERA: Your Honor, it should have been  
6 admitted as an exhibit in this case.

7 THE COURT: Yeah, it really should have been. I  
8 mean, you had it since May or maybe June or maybe July.

9 MS. DUNN: We did not, Your Honor. We did not.

10 THE COURT: Well, how did you get it?

11 MS. DUNN: It was referred to in an -- the  
12 August 8th earning statement by -- the company CEO refers to  
13 this document.

14 MR. GUARNERA: That's fine, Your Honor. It is  
15 dated on its face May --

16 THE COURT: All right. It's late in the day, and  
17 you've done very well so far about real disputes over  
18 issues.

19 I'm going to sustain the objection. You need the  
20 move on to something else. All right?

21 MS. DUNN: Thank you, Your Honor.

22 BY MS. DUNN:

23 Q Mr. Dederick, you are chief revenue officer at The  
24 Trade Desk, correct?

25 A Yes.

Cross-Examination - J. Dederick

1 Q At the time of your deposition, you were the chief  
2 client officer, correct?

3 A Yes.

4 Q Okay. And we can agree, can't we, that The Trade Desk  
5 views itself as a competitor to Google?

6 A No. We compete with DV360.

7 THE COURT: I'm sorry. It's late in the day. You  
8 need to speak up.

9 THE WITNESS: Oh, I'm sorry.

10 No. We compete with DV360, their DSP.

11 BY MS. DUNN

12 Q DV360 is a Google tool, correct?

13 A Yes.

14 Q So would you say that The Trade Desk is a competitor to  
15 Google, the company?

16 A No.

17 Q Okay. All right. And your testimony is that The Trade  
18 Desk does not compete with the Google display network,  
19 correct?

20 A We compete with DV360 as a demand-side platform.

21 Q My question was whether you compete with the Google  
22 display network.

23 A I mean, no. We compete with DV360, the DSP.

24 Q If you could turn in your binder, sir, to Defense  
25 Exhibit 122.

Cross-Examination - J. Dederick

1 THE COURT: Is there any objection to 122?

2 MR. GUARNERA: Your Honor, we object on hearsay  
3 grounds.

4 THE COURT: Well, it's an email sent to  
5 Mr. Dederick.

6 MR. GUARNERA: Your Honor, it's not actually  
7 email -- oh, excuse me, Your Honor. There's an email, but  
8 it's attaching a presentation that it does not appear  
9 Mr. Dederick authored.

10 MS. DUNN: Your Honor, this document is cited in  
11 the plaintiffs' findings of fact.

12 THE COURT: I'm going to allow it in. All right.  
13 So 1022 is in.

14 MS. DUNN: 122.

15 THE COURT: 1022.

16 MS. DUNN: No, 122. No zero.

17 MR. GUARNERA: Your Honor, this exhibit is under  
18 seal also.

19 THE COURT: Well, the one I have has a DTX 1022.

20 MS. DUNN: There's also a 1022. This is 0122.

21 THE COURT: I'm sorry. Hold on a second.

22 MS. DUNN: Apologies, Your Honor.

23 THE COURT: All right. Now, I am assuming that  
24 the seal on this is because -- whose document is this? A  
25 Google document or a --

Cross-Examination - J. Dederick

1 MR. GUARNERA: It is a Trade Desk document, Your  
2 Honor. They moved for it to be put under seal, and the  
3 Court granted that motion.

4 THE COURT: Then if you are going to question him  
5 on this, we have to excuse everybody out of the courtroom.

6 MS. DUNN: Your Honor, it's -- I apologize that  
7 this is all coming up late in the day because it's the last  
8 thing anybody wants to talk about.

9 There are quite a lot of Trade Desk documents that  
10 The Trade Desk -- and counsel maybe here in the courtroom --  
11 have asked to be under seal. So this will be an issue that  
12 more or less pervades this examination. So maybe we --

13 THE COURT: Everyone who's not connected to the  
14 case must leave at this point.

15 A MALE SPEAKER: Your Honor, may I approach?

16 THE COURT: No.

17 (People exit the courtroom.)

18 MS. DUNN: One other thought, Your Honor, is that  
19 we can meet and confer overnight to the extent that we run  
20 up against the Court's outer limit of the day and hope that  
21 we can find --

22 THE COURT: Everyone needs to leave the courtroom  
23 right now.

24 All right. Mr. Mene, have you checked the only  
25 attorneys who are left in here are attorneys who are working

Cross-Examination - J. Dederick

1 on the case?

2 MS. DUNN: I think the media are seeking to object  
3 is what's happening.

4 THE COURT: Well, the media can object all they  
5 want out in the hall. I have to get this case moving. Go  
6 on.

7 MS. WOOD: Your Honor, I would just note -- I  
8 don't know if people from Google who are not able to see  
9 highly confidential information are still in the courtroom.

10 MS. RHEE: They have left the courtroom, Your  
11 Honor.

12 MS. WOOD: Okay.

13 (People exit the courtroom.)

14 THE COURT: Everybody out.

15 All right. I am putting the burden on counsel to  
16 ensure that the only people who are left in the courtroom  
17 are authorized to be here.

18 MS. WOOD: I don't know any of these folks, but I  
19 can vouch for these folks.

20 THE COURT: All right.

21 MS. DUNN: We can vouch for the remainder of the  
22 folks.

23 MS. RHEE: Actually, no, Your Honor. We can vouch  
24 for the first row here. We don't know who --

25 MS. PREWITT: Elizabeth Prewitt, Your Honor, of



Cross-Examination - J. Dederick

1 Latham & Watkins and The Trade Desk in-house counsel as  
2 well --

3 THE COURT: You have to be at the lecturn when  
4 you're speaking.

5 Let's have counsel for Trade Desk.

6 MS. PREWITT: Thank you, Your Honor. Elizabeth  
7 Prewitt of Latham & Watkins for The Trade Desk.

8 THE COURT: Yes, ma'am.

9 MS. PREWITT: I also have cocounsel here, Aaron  
10 Chiu, Lauren Sun, as well as Guy Petrillo. And we also have  
11 in-house counsel with us, Ian Eisner, Julie Kleeman, and  
12 then another representative of The Trade Desk.

13 THE COURT: All right. What is it about these  
14 documents that is so sensitive that they cannot be  
15 discussed?

16 MS. PREWITT: Your Honor, I'll have to look at  
17 this. I'll look at the documents. There are confidential  
18 strategic -- there's confidential strategic information  
19 contained in the documents. There were a number of  
20 documents that fell within that category. We placed  
21 objections in connection with these documents in particular.

22 My understanding is Your Honor has ruled on that.  
23 It's actually a complete surprise to us for that reason,  
24 that we weren't notified in advance of Mr. Dederick's  
25 testimony that he would be cross-examined on documents that

Cross-Examination - J. Dederick

1 were subject to sealing. So...

2 THE COURT: Well, he can be -- it may have to be  
3 in a sealed courtroom, but we're going to get an objection  
4 from the media. So we're going to have to address that  
5 issue.

6 So I want to make sure that there aren't ways of  
7 redacting these documents such that they can be discussed.  
8 They don't necessarily have to be entered into evidence.

9 So how many of these documents do you --

10 MS. DUNN: We will count them now, Your Honor.  
11 There are quite a number, but most of the documents are  
12 under seal.

13 I do -- we are, you know, very willing and think  
14 it would be a great solution to meet and confer overnight on  
15 how to redact the documents to The Trade Desk's satisfaction  
16 so that we can proceed quickly with the examination.

17 In the meantime, we are counting up the documents.

18 In addition, Mr. Dederick's deposition has been  
19 designated as highly confidential as well.

20 MS. PREWITT: Your Honor, I'd just like to add  
21 that we were available to meet and confer with counsel on  
22 this. We would have preferred to have done this in a less  
23 theatrical setting than sending reporters out of the  
24 courtroom.

25 So we remain available to have discussions with

Cross-Examination - J. Dederick

1 counsel for Google on the subject. We would have rather had  
2 this discussion prior to open court.

3 THE COURT: Well, we have the evening. We're  
4 going to have to shut this down in a second.

5 But my quick look at this is that some of these  
6 issues -- GDN is an ad network instead of a DSP. It's not  
7 built on RTB technology. I mean, some of these are your  
8 quick -- I'm looking at this quickly -- your evaluations of  
9 Google. I don't know how that really is something that is  
10 so proprietary.

11 So I really want you to look carefully because I  
12 may be reviewing my decision about keeping them totally  
13 under seal. My practice has always been if the seal request  
14 is legitimate -- obviously, there are real business reasons  
15 to keep certain information under seal. But if it's been  
16 too broadly used --

17 Again, the law in the Fourth Circuit under the  
18 *Ashcroft* case is that as much of a court's proceedings as  
19 possible should be transparent. And we are going to have  
20 the media yelling and screaming first thing tomorrow  
21 morning. So it's important to reevaluate exactly what has  
22 to be used. Again, I will leave that with you-all.

23 But we start tomorrow morning at 9:00. I think to  
24 avoid any problems -- you're not going to like this, but I  
25 think I would want you -- unless you solve it overnight, in

Cross-Examination - J. Dederick

1 which case -- I think we should probably start at 8:30  
2 tomorrow morning. All right?

3 If there are no problems, you can email me this  
4 evening -- you've got my law clerk's email -- and we won't  
5 want to see you until 9:00.

6 If there are problems, then in a sealed context,  
7 I'll address it. And we'll let the media have an  
8 opportunity, after I've addressed it, to lodge their  
9 complaints. All right.

10 MS. DUNN: Your Honor, that makes good sense. I  
11 am informed -- and I need my colleagues for this -- that  
12 there may be some agreement to call one of the former Google  
13 witnesses first thing tomorrow. So I want to make sure  
14 that -- what Your Honor said makes complete sense, but I  
15 want to make sure we're not creating a different problem.

16 MS. WOOD: That's why I rose, Your Honor. You may  
17 recall that, with respect to some of the former employees,  
18 at your request, we had agreed to accommodate them for  
19 specific a start time on a specific day.

20 So Mr. Srinivasan is scheduled to started at  
21 9:00 a.m. tomorrow.

22 THE COURT: How long do you anticipate his  
23 testimony taking?

24 MS. WOOD: I would expect around the length that  
25 we've been seeing. Two hours would be my estimate, but I

Cross-Examination - J. Dederick

1 really don't know the length of the cross.

2 THE COURT: You think their direct is two hours?

3 MS. WOOD: No, no, no. I think the direct is an  
4 hour to an hour and a half.

5 THE COURT: Mr. Dederick, don't tell me your home  
6 address, but where are you from? What area?

7 THE WITNESS: Brooklyn, New York.

8 THE COURT: You don't have an accent.

9 Counsel, you're from Latham's. I assumed you're  
10 from DC?

11 MS. PREWITT: No, your Honor. I'm also from New  
12 York.

13 THE COURT: I hope you have hotel reservations.

14 MS. PREWITT: I will have a place to sleep, Your  
15 Honor. Thank you, ma'am.

16 THE COURT: Okay. All right. So I think that's  
17 what we're going to do. Hopefully, you can work it out  
18 overnight. If not, at 8:30 in a sealed courtroom, we'll  
19 address the issue. I'll let the media have -- at some  
20 point, they can come in and say something. We might start  
21 your witness a little after 9:00, but he will definitely be  
22 the first person we call.

23 So, Mr. Dederick, you're going to get a break.  
24 You don't have to be here at 9:00 tomorrow morning.

25 THE WITNESS: Okay.

Cross-Examination - J. Dederick

1 THE COURT: In fact, if you're telling me for  
2 certain you're sure your witness will be at least two hours?

3 MS. WOOD: I can't be certain because I don't know  
4 exactly --

5 THE COURT: How long do you think your direct will  
6 take?

7 MS. WOOD: I think the direct will be somewhere  
8 between an hour and an hour and a half. That's my best  
9 estimate.

10 THE COURT: All right. So that Mr. Dederick can  
11 kind of plan -- I don't like to have people have to sit  
12 around unnecessarily. I think it's safe to say we wouldn't  
13 need him back here until 11:30, 12:00?

14 MS. WOOD: 11:30. And, Your Honor, we can always  
15 fill in with some -- you know, there was a read-in we didn't  
16 get to today. So if we have time to fill and we want to  
17 give him a time certain --

18 THE COURT: Time certain. 2:00? After lunch?

19 MS. WOOD: That would be fine, Your Honor.

20 THE COURT: All right. That gives you the morning  
21 to relax.

22 MS. WOOD: I'm not sure --

23 THE COURT: We can't get you in any sooner than  
24 that. That's the problem.

25 But, Ms. Dunn, how long do you anticipate your

Cross-Examination - J. Dederick

1 cross taking with Mr. Dederick?

2 MS. DUNN: At this point, I think an hour, but I  
3 need to really look because I only just heard his direct.  
4 And I'll try to --

5 THE COURT: An hour. There will probably be a  
6 little bit of redirect, probably a little recross.

7 So, Counsel, for planning purposes, Mr. Dederick  
8 will likely be back on the stand between 1:00, maybe 2:00 --  
9 I doubt it -- in that time frame. All right?

10 THE WITNESS: One to two hours at 2:00?

11 THE COURT: That's what we're anticipating, yeah.

12 MS. DUNN: Your Honor, this probably goes without  
13 saying, but we'd ask just -- we've already handed out our  
14 cross material to the counsel. So if the rule on witnesses  
15 can apply.

16 THE COURT: Well, counsel can speak to their own  
17 client. So his counsel can -- Mr. Dederick's counsel can  
18 speak with him.

19 MS. DUNN: Well, the problem is they have all of  
20 our cross material. So...

21 THE COURT: There shouldn't be that much of a  
22 problem. I'm not going to worry about that. All right?

23 MS. DUNN: Okay.

24 THE COURT: All right. Is there anything else we  
25 need to address, then?

Cross-Examination - J. Dederick

1 Ms. Wood?

2 MS. WOOD: The only thing I might note, Your  
3 Honor, just -- we're trying to wrangle a lot of witnesses.  
4 We do have witnesses who have come in from California  
5 specifically to go tomorrow afternoon, one at 1:00 and one  
6 at 3:00 -- well, actually --

7 THE COURT: Not at 1:00; we're at lunch.

8 MS. WOOD: Right. He will be here at 1:00. So my  
9 only suggestion is if Mr. Dederick is available at 11:30, if  
10 we were to finish with Mr. Srinivasan by then, perhaps  
11 Mr. Dederick could go and we wouldn't disadvantage the other  
12 folks who are also coming in from California but didn't file  
13 a motion to quash. I feel like they're being -- their  
14 cooperation has resulted in them being treated --

15 THE COURT: Well, there's a lot of overlap of  
16 testimony that we're starting to hear. So there may be a  
17 way of tailoring everybody's testimony.

18 MS. WOOD: Understood. And we did drop Mr. Zeng  
19 for that purpose, Your Honor. I hope you understand we are  
20 trying to be as efficient as possible.

21 THE COURT: I have the impression that you'd like  
22 to get out of here as soon as possible.

23 THE WITNESS: Did I give that -- I didn't mean to  
24 give that impression.

25 THE COURT: So how about 11:30 tomorrow morning?



Cross-Examination - J. Dederick

1 THE WITNESS: Okay.

2 THE COURT: So if we can get you out before lunch,  
3 then you can go back to Brooklyn.

4 THE WITNESS: Okay. I'll work on the accent.

5 THE COURT: Counsel, you need to be ready by 11:30  
6 tomorrow morning.

7 MS. DUNN: Yes, Your Honor.

8 THE COURT: All right. Very good.

9 MS. WOOD: Thank you, Your Honor.

10 THE COURT: I think since it is getting late --  
11 there weren't that many exhibits. Let's get the exhibits  
12 done for tonight so we have that matter --

13 MS. DUNN: Your Honor, we also -- with the Court's  
14 indulgence -- understand Your Honor's ruling about the  
15 exhibit that we tried to use for cross-examination.

16 Because it is a statement by the company that has  
17 gone out widely to investors and partners and clients and  
18 publicly, we would like an opportunity just to write the  
19 Court a letter explaining why we would like to use it for  
20 cross-examination. It's very relevant to the market  
21 definition in the case.

22 THE COURT: I think you're going to be able to get  
23 that evidence in other ways than this way. I'm going to  
24 stay with my ruling. I don't do a lot of second-guessing.  
25 If I'm wrong, I'm wrong, but it keeps the case moving. So

Cross-Examination - J. Dederick

1 we've finished that issue. All right?

2 MS. DUNN: Understood.

3 THE COURT: If there are any media people out  
4 there, they can come in to hear us read the evidence into  
5 the record. All right?

6 And, Mr. Dederick, you can step down.

7 THE WITNESS: Okay.

8 (Mr. Dederick exits the courtroom.)

9 THE COURT: Okay. We are going to now read into  
10 the record -- for the record, the courtroom is unsealed, and  
11 I think media people are coming back in.

12 All right. We're going to read into the record  
13 those exhibits that have been entered into evidence today.

14 THE COURTROOM DEPUTY: PTX 1814, PTX 587,  
15 PTX 1736, DTX 1508, DTX 549, DTX 259, DTX 129, PTX 1780.

16 THE COURT: I'm sorry. 17 what?

17 THE COURTROOM DEPUTY: 80.

18 PTX 551; PTX 542, but only Bates Number 335; PTX  
19 705; PTX 697; PTX 1040; DTX 1828; DTX 1915; DTX 1926; DTX  
20 774; DTX 768; DTX 615; and PTX 1650.

21 MS. WOOD: Could I just ask one clarification?  
22 The 1828 --

23 THE COURTROOM DEPUTY: 28?

24 MS. WOOD: That was a PTX?

25 THE COURTROOM DEPUTY: DTX.

1 MS. WOOD: DTX. And that was through Mr. Ravi?

2 THE COURTROOM DEPUTY: Yes. That was the first  
3 one on cross.

4 MS. WOOD: I don't have that one either. I'll be  
5 honest. But I can check my notes and --

6 MS. HIBBLER: I didn't have it.

7 MS. WOOD: 1828?

8 THE COURTROOM DEPUTY: Yes, 1828.

9 THE COURT: 1828, it's a chart from 2019. It  
10 shows a great increase in display ads only. Is that  
11 consistent now with what you think you've put in?

12 MS. WOOD: Yes, Your Honor.

13 THE COURT: It was Defense Exhibit 1828. That's  
14 consistent with Google's records or not?

15 MR. SPALDING: Yes.

16 THE COURT: Yes. Okay.

17 MR. ISAACSON: 1828 is what we're talking about.

18 THE COURTROOM DEPUTY: That was the CV of  
19 Mr. Ravi.

20 MS. WOOD: We're good, Your Honor.

21 THE COURT: All right. So the plaintiffs agree  
22 that all the exhibits that you think you entered today are  
23 in?

24 MS. WOOD: Yes, Your Honor.

25 THE COURT: And Google is satisfied that all the

1 exhibits you feel were accepted by the Court are in?

2 MS. DUNN: Yes, Your Honor.

3 THE COURT: Okay. Just for a minute. I know some  
4 of the media people returned. There are documents that were  
5 deemed under seal that the Court previously ruled on.

6 What's going to happen tonight is counsel for  
7 Trade Desk is going to meet with counsel -- trial counsel to  
8 see if they can work out redactions of those exhibits so  
9 that the questioning can occur tomorrow.

10 The schedule for tomorrow morning is, if there are  
11 no problems, if they've worked it out overnight, the trial  
12 will start in open court at 9:00.

13 If there are issues involving sealing matters,  
14 they have to be done under seal. I will be holding court at  
15 8:30, and the public will not be permitted while we're  
16 working that out.

17 We're going to try to keep the amount of sealed  
18 material to an absolute minimum, but the law is quite clear  
19 that companies have a right -- and this is a third party.  
20 This is not an entity that is -- it's not Google. This is a  
21 third party who's provided information -- documents. Some  
22 of the documents may have proprietary business information  
23 that is not appropriate for public disclosure.

24 That's the situation right now.

25 At 9:00 tomorrow morning, assuming we're not

1 having any problems, the first witness will not be  
2 Mr. Dederick but will be one of the witnesses who's coming  
3 in under an agreement we had with some of the --

4 He's a former Google person, correct?

5 MS. WOOD: Yes, Your Honor. Mr. Srinivasan.

6 THE COURT: Mr. Srinivasan. He'll be the first  
7 witness on deck. And so that's what the schedule looks like  
8 for tomorrow morning. All right?

9 We'll recess court until tomorrow morning.

10 (Proceedings adjourned at 6:14 p.m.)

11 -----

12

13

14

15

16

17

18

19

20

21

22 I certify that the foregoing is a true and  
23 accurate transcription of my stenographic notes.

24

25

/s/  
Rhonda F. Montgomery, CCR, RPR